Grizzly Industrial, Inc.®

MODEL G9860, G9860ZX, G9953, G9953ZX, & G9953ZXF EXTREME SERIES JOINTER

OWNER'S MANUAL

(For models manufactured since 09/11)

COPYRIGHT © NOVEMBER, 2008 BY GRIZZLY INDUSTRIAL, INC., REVISED OCTOBER, 2011 (BL)
WARNING: NO PORTION OF THIS MANUAL MAY BE REPRODUCED IN ANY SHAPE OR FORM WITHOUT THE WRITTEN APPROVAL OF GRIZZLY INDUSTRIAL, INC.
#TS11249 PRINTED IN TAIWAN

⚠ WARNING!

This manual provides critical safety instructions on the proper setup, operation, maintenance, and service of this machine/tool. Save this document, refer to it often, and use it to instruct other operators.

Failure to read, understand and follow the instructions in this manual may result in fire or serious personal injury—including amputation, electrocution, or death.

The owner of this machine/tool is solely responsible for its safe use. This responsibility includes but is not limited to proper installation in a safe environment, personnel training and usage authorization, proper inspection and maintenance, manual availability and comprehension, application of safety devices, cutting/sanding/grinding tool integrity, and the usage of personal protective equipment.

The manufacturer will not be held liable for injury or property damage from negligence, improper training, machine modifications or misuse.

⚠ WARNING!

Some dust created by power sanding, sawing, grinding, drilling, and other construction activities contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm. Some examples of these chemicals are:

- **Lead from lead-based paints.**
- **Crystalline silica from bricks, cement and other masonry products.**
- **Arsenic and chromium from chemically-treated lumber.**

Your risk from these exposures varies, depending on how often you do this type of work. To reduce your exposure to these chemicals: Work in a well ventilated area, and work with approved safety equipment, such as those dust masks that are specially designed to filter out microscopic particles.

Table of Contents

INTRODUCTION 3
Manual Accuracy 3
Contact Info 3
Machine Description 3
Identification 4
Model Specification Comparison 5

SECTION 1: SAFETY 6
Safety Instructions for Machinery 6
Additional Safety Instructions for Jointers 8

SECTION 2: POWER SUPPLY 9
Model G9953ZXF 440V Conversion 11

SECTION 3: SETUP 13
Needed for Setup 13
Unpacking 13
Inventory 14
Clean Up 14
Site Considerations 15
Mounting to Shop Floor 15
Moving & Assembling Jointer 16
Adjusting Cutterhead Guard Tension 19
Setting Outfeed Table Height 19
Dust Collection 22
Test Run 22
Recommended Adjustments 23

SECTION 4: OPERATIONS 24
Basic Controls 24
Stock Inspection & Requirements 26
Squaring Stock 27
Surface Planning 28
Edge Jointing 29
Bevel Cutting 30

SECTION 5: ACCESSORIES 31

SECTION 6: MAINTENANCE 33
Schedule 33
Cleaning & Protecting 33
Lubrication 34
V-Belts 35

SECTION 7: SERVICE 36
Troubleshooting 36
Infeed Table Stop Bolt 38
Rotating/Replacing 38
Cutterhead Inserts 38
Air Pressure Torque Wrench 39
Adjusting/Replacing Cutterhead Knives 39
Setting Fence Stops 42
Adjusting Table Parallelism 44

SECTION 8: WIRING 48
Wiring Safety Instructions 48
G9860 & G9860ZX Wiring Diagram 49
G9953 & G9953ZX Wiring Diagram 50
G9953ZXF 220V Wiring Diagram 51
G9953ZXF 440V Wiring Diagram 52

SECTION 9: PARTS 53
G9860/G9860ZX Cabinet Breakdown 53
& Parts List 53
G9860/G9860ZX Cutterhead & Motor Breakdown 54
G9860/G9860ZX Fence Breakdown 56
G9860/G9860ZX Table Breakdown 58
& Parts List 58
G9860/G9860ZX Handwheel Breakdown 59
& Parts List 59
G9953/G9953ZX/G9953ZXF Cabinet Breakdown & Parts List 60
G9953/G9953ZX/G9953ZXF Cutterhead Breakdown 61
G9953/G9953ZX/G9953ZXF Fence Breakdown 63
G9953/G9953ZX/G9953ZXF Table Breakdown 65
G9953/G9953ZX/G9953ZXF Handwheel Breakdown & Parts List 67
G9953/G9953ZX/G9953ZXF Motor Breakdown 68
Label Placement 69

WARRANTY AND RETURNS 73

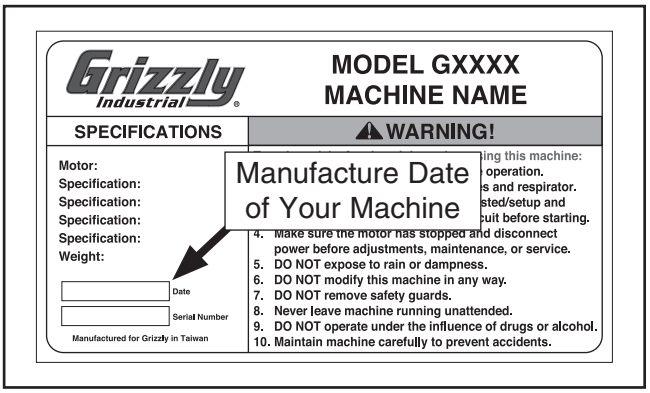
INTRODUCTION

Manual Accuracy

We are proud to offer this manual with your new machine! We've made every effort to be exact with the instructions, specifications, drawings, and photographs of the machine we used when writing this manual. However, sometimes we still make an occasional mistake.

Also, owing to our policy of continuous improvement, **your machine may not exactly match the manual**. If you find this to be the case, and the difference between the manual and machine leaves you in doubt, check our website for the latest manual update or call technical support for help.

Before calling, find the manufacture date of your machine by looking at the date stamped into the machine ID label (see below). This will help us determine if the manual version you received matches the manufacture date of your machine.



For your convenience, we post all available manuals and manual updates for free on our website at **www.grizzly.com**. Any updates to your model of machine will be reflected in these documents as soon as they are complete.

Contact Info

We stand behind our machines. If you have any questions or need help, use the information below to contact us. Before contacting, please get the serial number and manufacture date of your machine. This will help us help you faster.

Grizzly Technical Support
1203 Lycoming Mall Circle
Muncy, PA 17756
Phone: (570) 546-9663
Email: techsupport@grizzly.com

We want your feedback on this manual. What did you like about it? Where could it be improved? Please take a few minutes to give us feedback.

Grizzly Documentation Manager
P.O. Box 2069
Bellingham, WA 98227-2069
Email: manuals@grizzly.com

Machine Description

A jointer is used to flatten the face or edge of a workpiece, which is required when properly "squaring up" a workpiece for later construction or jointing. A jointer can also cut bevels and other specialized cuts with various jigs or fixtures.

A typical cut on a jointer is made by firmly holding a workpiece against the infeed table and fence, then moving the workpiece over the cutterhead while using the fence as a guide. As the workpiece moves over the cutterhead, the knives or cutters make many shallow cuts that "shave" off the surface of the workpiece. Since only a small amount of the workpiece is removed during a jointer cut, most jointer cuts are repeated many times to yield a desired result.

Identification

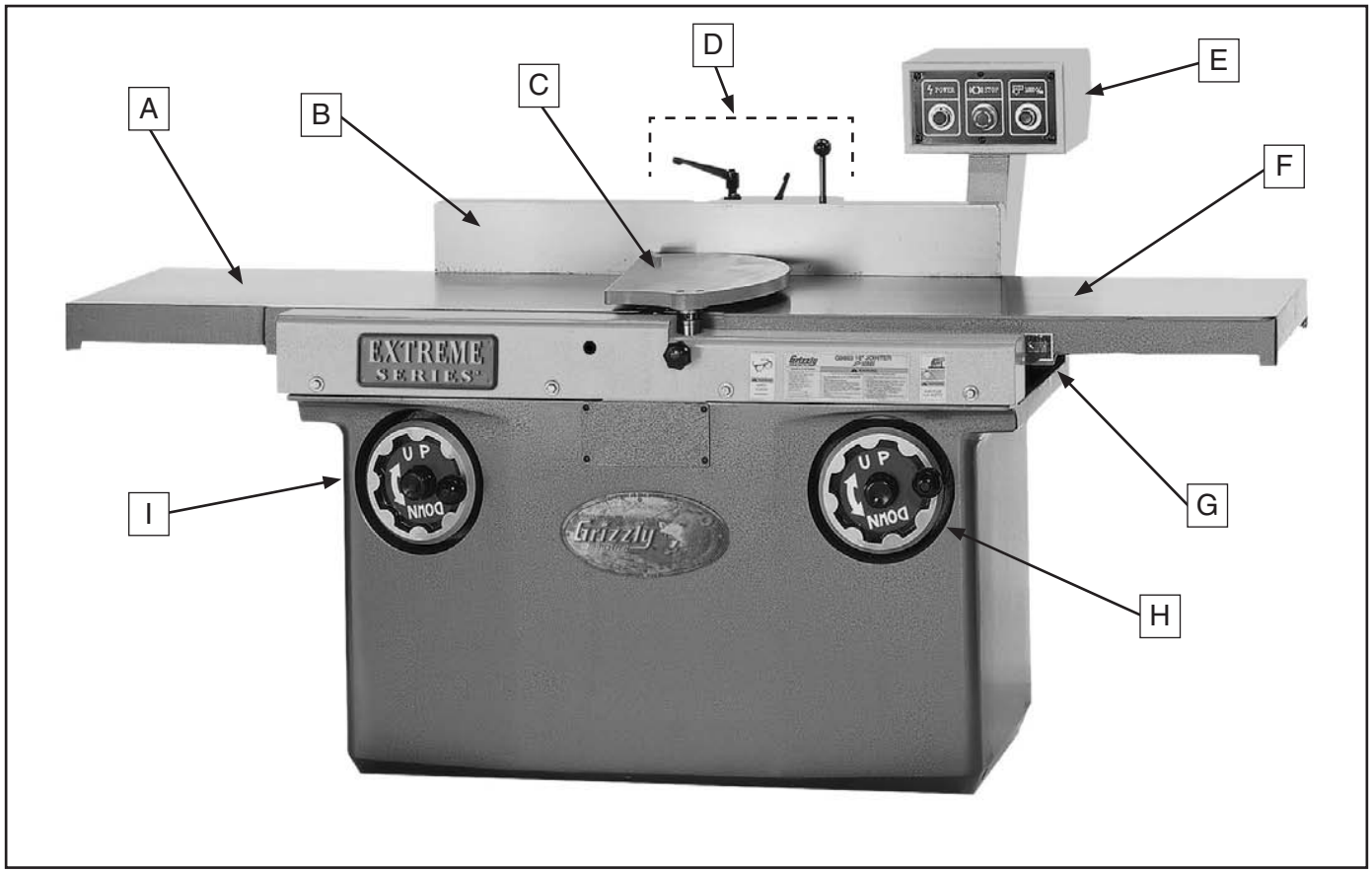


Figure 1. Model G9860/G9860ZX identification.

A. Outfeed Table
B. Fence
C. Cutterhead Guard
D. Fence Controls (refer to **Fence Controls** on **Page 25** for detailed Information)
E. Control Panel (refer to **Control Panel** on **Page 24** for detailed information).
F. Infeed Table
G. Depth of Cut Scale & Pointer
H. Infeed Table Handwheel & Lock
I. Outfeed Table Handwheel & Lock

Model Specification Comparison

	G9860	G9860ZX	G9953	G9953ZX	G9953ZXF
Motor HP	3	3	5	5	5
Motor Voltage	220V	220V	220V	220V	220V/440V
Motor Phase	Single	Single	Single	Single	3-Phase
Table Dimension	12½"W x 80"L	12½"W x 80"L	16¼"W x 99¼"L	16¼"W x 99¼"L	16¼"W x 99¼"L
Cutterhead Type	Knife	Spiral	Knife	Spiral	Spiral
Number of Knives	4	N/A	4	N/A	N/A
Number of Cutter Inserts	N/A	84	N/A	120	120
Number of Cutter Spirals	N/A	6	N/A	6	6
Cutterhead Speed	5900 RPM	5900 RPM	5000 RPM	5000 RPM	5000 RPM
Number of Cuts/Min.	23600	Effective 35400	20000	Effective 30000	Effective 30000
Max. Width of Cut	11 13/16"	11 13/16"	16"	16"	16"
Max. Depth of Cut	5/16"	5/16"	5/16"	5/16"	5/16"
Table Length x Width	80" x 12½"	80" x 12½"	99¼" x 16¼"	99¼" x 16¼"	99¼" x 16¼"
Fence Length x Height	39¼" x 4¾"	39¼" x 4¾"	43¼" x 6⅝"	43¼" x 6⅝"	43¼" x 6⅝"
Fence Stops	45° & 90°				
Floor-to-Table Height	30¾"				
Table Movement	Parallelogram				
Cabinet & Fence Construction	Cast Iron				
Table Construction	Precision Ground Cast Iron				
Dust Port	1 @ 4"				
Country of Origin	Taiwan (ISO 9001 Factory)				
Weight	1200 lbs.	1200 lbs.	1650 lbs.	1650 lbs.	1650 lbs.

Figure 2. Model specification comparison chart.

SECTION 1: SAFETY

⚠WARNING

For Your Own Safety, Read Instruction Manual Before Operating this Machine

The purpose of safety symbols is to attract your attention to possible hazardous conditions. This manual uses a series of symbols and signal words intended to convey the level of importance of the safety messages. The progression of symbols is described below. Remember that safety messages by themselves do not eliminate danger and are not a substitute for proper accident prevention measures.

⚠DANGER **Indicates an imminently hazardous situation which, if not avoided, WILL result in death or serious injury.**

⚠WARNING **Indicates a potentially hazardous situation which, if not avoided, COULD result in death or serious injury.**

⚠CAUTION **Indicates a potentially hazardous situation which, if not avoided, MAY result in minor or moderate injury. It may also be used to alert against unsafe practices.**

NOTICE **This symbol is used to alert the user to useful information about proper operation of the machine.**

⚠WARNING
Safety Instructions for Machinery

OWNER'S MANUAL. Read and understand this owner's manual BEFORE using machine. Untrained users can be seriously hurt.

EYE PROTECTION. Always wear ANSI-approved safety glasses or a face shield when operating or observing machinery to reduce the risk of eye injury or blindness from flying particles. Everyday eyeglasses are not approved safety glasses.

HAZARDOUS DUST. Dust created while using machinery may cause cancer, birth defects, or long-term respiratory damage. Be aware of dust hazards associated with each workpiece material, and always wear a NIOSH-approved respirator to reduce your risk.

WEARING PROPER APPAREL. Do not wear clothing, apparel, or jewelry that can become entangled in moving parts. Always tie back or cover long hair. Wear non-slip footwear to avoid accidental slips which could cause a loss of workpiece control.

HEARING PROTECTION. Always wear hearing protection when operating or observiing loud machinery. Extended exposure to this noise without hearing protection can cause permanent hearing loss.

MENTAL ALERTNESS. Be mentally alert when running machinery. Never operate under the influence of drugs or alcohol, when tired, or when distracted.

⚠WARNING

DISCONNECTING POWER SUPPLY. Always disconnect machine from power supply before servicing, adjusting, or changing cutting tools (bits, blades, cutters, etc.). Make sure switch is in OFF position before reconnecting to avoid an unexpected or unintentional start.

APPROVED OPERATION. Untrained operators can be seriously hurt by machinery. Only allow trained or properly supervised people to use machine. When machine is not being used, disconnect power, remove switch keys, or lock-out machine to prevent unauthorized use—especially around children. Make workshop kid proof!

DANGEROUS ENVIRONMENTS. Do not use machinery in wet or rainy locations, cluttered areas, around flammables, or in dark areas. Keep work area clean, dry, and well-lighted.

ONLY USE AS INTENDED. Only use machine for its intended purpose. Never modify machine for a purpose not intended by the manufacturer!

USE RECOMMENDED ACCESSORIES. Consult this owner's manual or the manufacturer for recommended accessories. Using improper accessories will increase the risk of serious injury.

CHILDREN & BYSTANDERS. Keep children and bystanders a safe distance away from work area. Stop using machine if children or bystanders become a distraction.

REMOVE ADJUSTING TOOLS. Never leave adjustment tools, chuck keys, wrenches, etc. in or on machine—especially near moving parts. Verify removal before starting!

SECURING WORKPIECE. When required, use clamps or vises to secure workpiece. A secured workpiece protects hands and frees both of them to operate the machine.

FEED DIRECTION. Unless otherwise noted, feed work against the rotation of blades or cutters. Feeding in the same direction of rotation may pull your hand into the cut.

FORCING MACHINERY. Do not force machine. It will do the job safer and better at the rate for which it was designed.

GUARDS & COVERS. Guards and covers can protect you from accidental contact with moving parts or flying debris. Make sure they are properly installed, undamaged, and working correctly before using machine.

NEVER STAND ON MACHINE. Serious injury or accidental contact with cutting tool may occur if machine is tipped. Machine may be damaged.

STABLE MACHINE. Unexpected movement during operations greatly increases risk of injury or loss of control. Before starting, verify machines are stable and mobile base (if used) is locked.

AWKWARD POSITIONS. Keep proper footing and balance at all times when operating machine. Do not overreach! Avoid awkward hand positions that make workpiece control difficult or increase the risk of accidental injury.

UNATTENDED OPERATION. Never leave machine running while unattended. Turn machine ***OFF*** and ensure all moving parts completely stop before walking away.

MAINTAIN WITH CARE. Follow all maintenance instructions and lubrication schedules to keep machine in good working condition. An improperly maintained machine increases risk of injury.

CHECK DAMAGED PARTS. Regularly inspect machine for damaged parts, loose bolts, mis-adjusted or mis-aligned parts, binding, or any other conditions that may affect safe operation. Always repair or replace damaged or mis-adjusted parts before operating machine.

MAINTAIN POWER CORDS. When disconnecting cord-connected machines from power, grab and pull the plug—NOT the cord. Pulling the cord may damage the wires inside. Do not handle cord/plug with wet hands. Avoid cord damage by keeping it away from heated surfaces, high traffic areas, harsh chemicals, and wet/damp locations.

EXPERIENCING DIFFICULTIES. If at any time you are experiencing difficulties performing the intended operation, stop using the machine! Contact our Technical Support Department at (570) 546-9663.

⚠WARNING
Additional Safety Instructions for Jointers

JOINTER KICKBACK. "Kickback" is when the workpiece is thrown off the jointer table by the force of the cutterhead. Always use push blocks and safety glasses to reduce the likelihood of injury from “kickback.” If you do not understand what kickback is, or how it occurs, DO NOT operate this machine!

OUTFEED TABLE ALIGNMENT. Keep the top surface of the outfeed table parallel and even with the knives at top dead center (the highest point during rotation) to reduce the risk of kickback and personal injuries.

PUSH BLOCKS. Always use push blocks when using this machine. Never pass your hands directly over the cutterhead without a push block.

WORKPIECE SUPPORT. Adequately supporting the workpiece at all times while cutting is critical for making safe cuts and avoiding injury. Never attempt to make a cut with an unstable workpiece.

USING GOOD STOCK. Jointing safety begins with your lumber. Inspect your stock carefully before you feed it over the cutterhead. Never joint a board that has loose knots, nails, or staples. If you have any doubts about the stability or structural integrity of your stock, DO NOT joint it!

KICKBACK ZONE. The "kickback zone" is the path that is in line with the tables. Never stand or allow others to stand in this area during operation.

MAXIMUM CUTTING DEPTH. The maximum cutting depth for one pass is 5⁄16". Never attempt any single cut deeper!

JOINTING WITH THE GRAIN. Jointing against the grain or jointing end grain is dangerous and could produce chatter or excessive chip out. Always joint with the grain.

GUARDS IN PLACE. All operations must be performed with the cutterhead guard in place.

PROPER CUTTING. When cutting, always keep the workpiece moving toward the outfeed table until the workpiece has passed completely over the cutterhead. Never back the work toward the infeed table.

SAFE KNIFE PROJECTION. Knives should never be set in the cutterhead so they project more than 1⁄8" (0.125") from the cutterhead body. Knives that project from the cutterhead too far may come loose during operation, may become damaged, or may damage the cutterhead.

⚠WARNING

Like all machinery there is potential danger when operating this machine. Accidents are frequently caused by lack of familiarity or failure to pay attention. Use this machine with respect and caution to decrease the risk of operator injury. If normal safety precautions are overlooked or ignored, serious personal injury may occur.

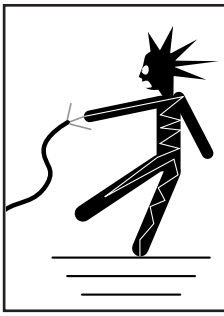
⚠CAUTION

No list of safety guidelines can be complete. Every shop environment is different. Always consider safety first, as it applies to your individual working conditions. Use this and other machinery with caution and respect. Failure to do so could result in serious personal injury, damage to equipment, or poor work results.

SECTION 2: POWER SUPPLY

Availability

Before installing the machine, consider the availability and proximity of the required power supply circuit. If an existing circuit does not meet the requirements for this machine, a new circuit must be installed. To minimize the risk of electrocution, fire, or equipment damage, installation work and electrical wiring must be done by a qualified electrician in accordance with all applicable codes and standards.



⚠WARNING

Electrocution, fire, or equipment damage may occur if machine is not correctly grounded and connected to the power supply.

Full-Load Current Rating

The full-load current rating is the amperage a machine draws at 100% of the rated output power. On machines with multiple motors, this is the amperage drawn by the largest motor or sum of all motors and electrical devices that might operate at one time during normal operations.

The full-load current is not the maximum amount of amps that the machine will draw. If the machine is overloaded, it will draw additional amps beyond the full-load rating.

If the machine is overloaded for a sufficient length of time, damage, overheating, or fire may result—especially if connected to an undersized circuit. To reduce the risk of these hazards, avoid overloading the machine during operation and make sure it is connected to a power supply circuit that meets the requirements in the following section.

Circuit Information

A power supply circuit includes all electrical equipment between the breaker box or fuse panel in the building and the machine. The power supply circuit used for this machine must be sized to safely handle the full-load current drawn from the machine for an extended period of time. (If this machine is connected to a circuit protected by fuses, use a time delay fuse marked D.)

⚠CAUTION

For your own safety and protection of property, consult a qualified electrician if you are unsure about wiring practices or electrical codes in your area.

Note: *The circuit requirements listed in this manual apply to a dedicated circuit—where only one machine will be running at a time. If this machine will be connected to a shared circuit where multiple machines will be running at the same time, consult a qualified electrician to ensure that the circuit is properly sized for safe operation.*

Circuit Requirements for G9860/ G9860ZX

Full-Load Current Rating ..... 16 Amps
Nominal Voltage 220V/240V
Cycle ..... 60 Hz
Phase 1-Phase
Circuit Rating ..... 20 Amps
Plug/Receptacle ..... NEMA 6-20
Cord ..... 3-Wire, 12 AWG, 300VAC, "S"-Type

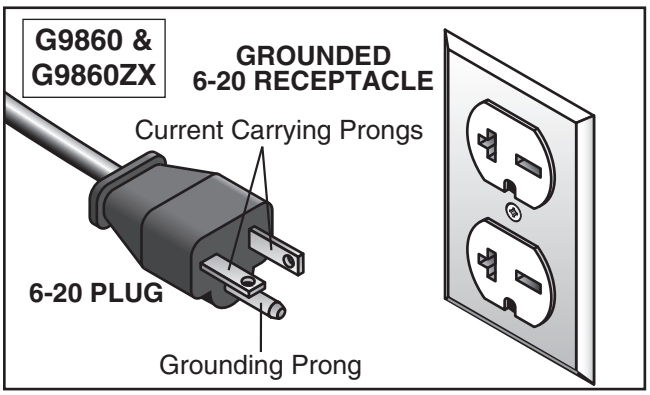


Figure 3. Typical 6-20 plug and receptacle.

Circuit Requirements for G9953/ G9953ZX

Full-Load Current Rating ..... 25 Amps
Nominal Voltage 220V/240V
Cycle ..... 60 Hz
Phase 1-Phase
Circuit Rating ..... 30 Amps
Plug/Receptacle ..... NEMA L6-30
Cord ..... 3-Wire, 10 AWG, 300VAC, "S"-Type

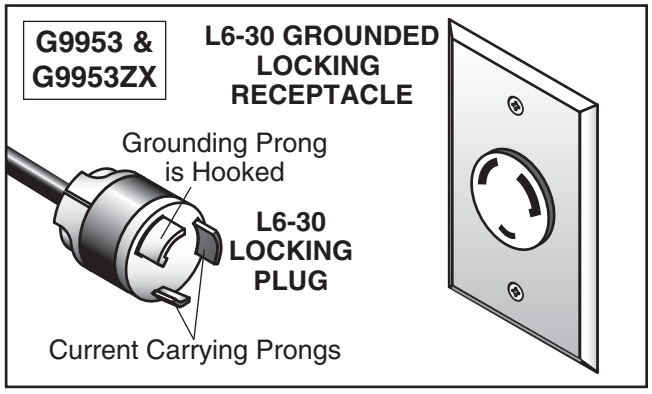


Figure 4. Typical L6-30 plug and receptacle.

G9953ZXF Circuit Requirements for 220V Operation

This machine is prewired to operate on a 220V power supply circuit that has a verified ground and meets the following requirements:

Full-Load Current Rating ..... 14 Amps
Nominal Voltage 220V/240V
Cycle ..... 60 Hz
Phase 3-Phase
Circuit Rating ..... 20 Amps
Connection ..... Hardwire with Locking Switch

G9953ZXF Circuit Requirements for 440V Operation

This machine can be converted to operate on a 440V power supply (refer to **Voltage Conversion** instructions) that has a verified ground and meets the following requirements:

Full-Load Current Rating ..... 7 Amps
Nominal Voltage 440V/480V
Cycle ..... 60 Hz
Phase 3-Phase
Rated Size ..... 15 Amps
Connection ..... Hardwire with Locking Switch

A permanently connected (hardwired) power supply is typically installed with wires running through mounted and secured conduit. A disconnecting means, such as a locking switch (see following **Figure**), must be provided to allow the machine to be disconnected (isolated) from the power supply when required. This installation must be performed by an electrician in accordance with all applicable electrical codes and ordinances.

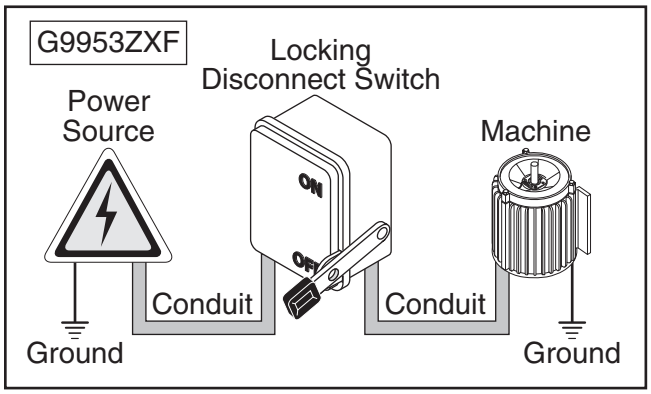


Figure 5. Typical setup of a permanently connected machine.

WARNING

Serious injury could occur if you connect the machine to power before completing the setup process. DO NOT connect to power until instructed later in this manual.

Note: *The circuit requirements listed in this manual apply to a dedicated circuit—where only one machine will be running at a time. If this machine will be connected to a shared circuit where multiple machines will be running at the same time, consult a qualified electrician to ensure that the circuit is properly sized for safe operation.*

Grounding Requirements

This machine MUST be grounded. In the event of certain malfunctions or breakdowns, grounding reduces the risk of electric shock by providing a path of least resistance for electric current.

NOTICE

No adapter is available or should be used with this machine. If the machine must be reconnected for use on a different type of electric circuit, the reconnection should be made by qualified service personnel; and after reconnection, the machine must comply with all local codes and ordinances.

Improper connection of the equipment-grounding wire can result in a risk of electric shock. The wire with green insulation (with or without yellow stripes) is the equipment-grounding wire. If repair or replacement of the power cord or plug is necessary, do not connect the equipment-grounding wire to a live (current carrying) terminal.

Check with a qualified electrician or service personnel if you do not understand these grounding requirements, or if you are in doubt about whether the tool is properly grounded. If you ever notice that a cord or plug is damaged or worn, disconnect it from power, and immediately replace it with a new one.

Extension Cords (G9860, G9860ZX, G9953, & G9953ZX Only)

We do not recommend using an extension cord with this machine. If you must use an extension cord, only use it if absolutely necessary and only on a temporary basis.

Extension cords cause voltage drop, which may damage electrical components and shorten motor life. Voltage drop increases as the extension cord size gets longer and the gauge size gets smaller (higher gauge numbers indicate smaller sizes).

Any extension cord used with this machine must contain a ground wire, match the required plug and receptacle, and meet the following requirements:

Minimum Gauge Size .....12 AWG
Maximum Length (Shorter is Better).....50 ft.

Model G9953ZXF 440V Conversion

To operate your jointer with 440V power, you must: 1) replace the magnetic switch contactor, 2) replace the overload relay, 3) replace the power lamp and ON button light bulbs, 4) re-wire the motor, and 5) have an electrician hardwire the machine to a locking disconnect switch.

Refer to **Page 52** for the full **440V Wiring Diagram**.

⚠WARNING

You MUST disconnect the machine from the power source before beginning any of the following 440V conversion procedures to avoid serious personal injury or death by electrocution.

Replacing Contactor & Overload Relay

1. DISCONNECT JOINTER FROM POWER!

2. Remove the control panel from the electrical pedestal to access the contactor and overload relay.

3. Replace the existing contactor and overload relay with those from the 440V Conversion Kit (Part Number P9953ZXF042) (refer to **Pages 51– 52** for detailed illustrations), then set the overload relay load dial to 7, as shown in **Figure 6** on the next page.

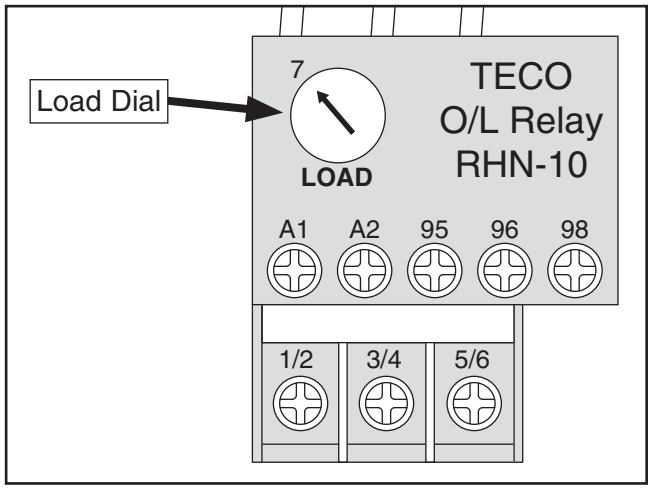


Figure 6. 440V overload relay set at 7 amps.

4. Replace the control panel before connecting the jointer to power.

Replacing Control Panel Light Bulbs

1. DISCONNECT JOINTER FROM POWER!

2. Remove the control panel from the electrical pedestal to access the rear of the power lamp and ON button assemblies (see **Figure 7**).

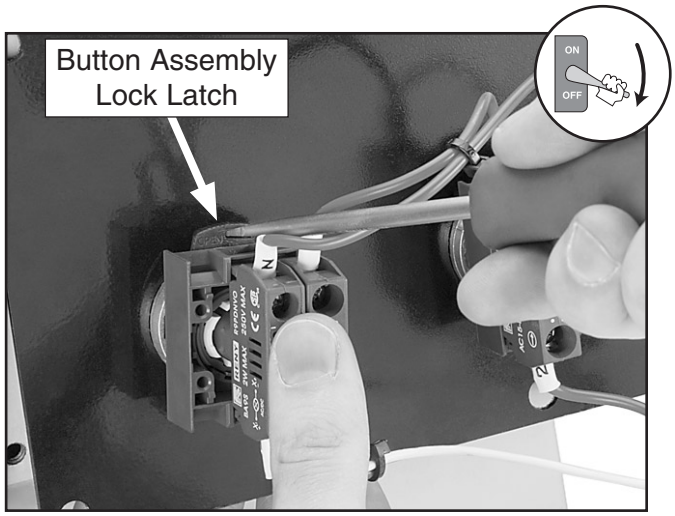


Figure 7. Accessing the light bulb from the rear of the control panel.

3. Use a small, flat screwdriver to move the power lamp assembly lock latch to the left, as shown in **Figure 7**, pull the assembly loose from the panel, then replace the light bulb.

4. Re-install the lamp assembly, move the lock latch to the right to secure it.

5. Repeat **Steps 3–4** for the ON button, then re-install the control panel onto the electrical pedestal.

Rewiring Motor

1. DISCONNECT JOINTER FROM POWER!

2. Remove the rear motor access panel, then remove the motor wiring junction box cover.

3. Configure the terminal jumpers as shown in **Figure 8**.

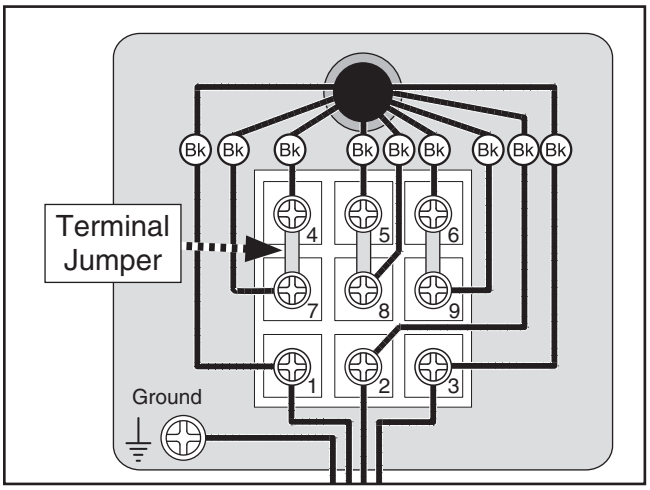
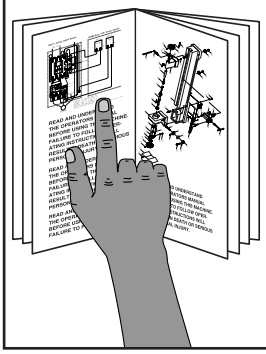


Figure 8. Illustration of motor wired for 440V operation.

4. Replace the motor junction box cover and access panel before connecting the jointer to power.

SECTION 3: SETUP

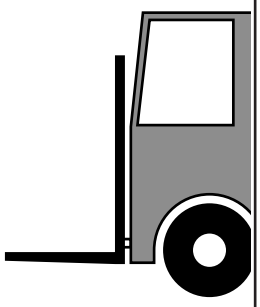


⚠WARNING

This machine presents serious injury hazards to untrained users. Read through this entire manual to become familiar with the controls and operations before starting the machine!

⚠WARNING

Wear safety glasses during the entire setup process!



⚠WARNING

The Extreme Series Jointer is a heavy machine. Serious personal injury may occur if safe moving methods are not used. To be safe, get assistance and use power equipment rated for at least 1500 lbs. to move the shipping crate and remove the machine from the crate.

Needed for Setup

Read through the entire **SETUP** section to understand the procedures and items required to correctly move, place, and assemble your machine.

The following are needed to complete the setup process, but are not included with your machine:

Description	Qty
• Forklift or Hoist (rated for 1500 lbs)	1
• Lifting Straps (rated for 1000 lbs. each)	2
• Assistants At Least 1	
• Safety Glasses 1 Pair per Person	
• Precision Level	1
• Metal Floor Shims As Needed	
• Floor Mounting Hardware As Needed	
• Cleaning Solvent & Shop Rags As Needed	
• Precision Straightedge 6'	1
• Phillips Screwdriver #2	1
• Hex Wrench 10mm	1
• Wrench 18mm	1

Unpacking

Your machine was carefully packaged for safe transportation. Remove the packaging materials from around your machine and inspect it. If you discover the machine is damaged, *please immediately call Customer Service at (570) 546-9663 for advice.*

Save the containers and all packing materials for possible inspection by the carrier or its agent. *Otherwise, filing a freight claim can be difficult.*

When you are completely satisfied with the condition of your shipment, inventory the contents.

Inventory

The following is a description of the main components shipped with your machine. Lay the components out to inventory them.

Note: *If you can't find an item on this list, check the mounting location on the machine or examine the packaging materials carefully. Occasionally we pre-install certain components for shipping purposes.*

Inventory: (Figure 9)		Qty
A.	Fence Assembly	1
B.	Cutterhead Guard	1
C.	Push Blocks	2
D.	Fence Support (G9860/G9860ZX)	1
E.	Fence Lock Assembly (G9860/G9860ZX)	1
F.	Fence Tilt Handle	1

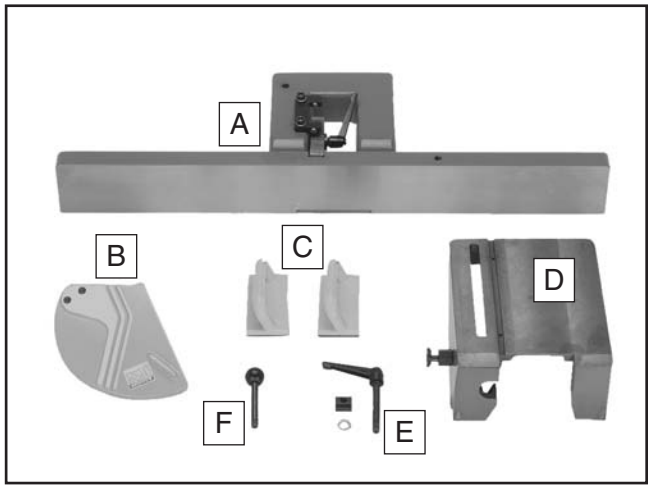


Figure 9. Inventory.

Hardware & Tools: (not shown)	Qty
• Combo Wrench 10mm	1
• Open-End Wrench 11/13mm	1
• Hex Wrenches 3, 4, 5, 6, 8mm	1 Each
• Knife Cutterhead Models:	
—Knife Setting Gauge	1
• Spiral Cutterhead Models:	
—Pneumatic Torque Wrench Assembly	1
—T-Handle Driver	1
—Torx Bits T-20	15
—Indexable Inserts 14 x 14 x 2mm	10
—Flat Head Torx Screws T-20 M6-1 x 15	30

Clean Up

The unpainted surfaces are coated with a waxy oil to prevent corrosion during shipment. Remove this protective coating with a solvent cleaner or degreaser, such as shown in **Figure 10**. For thorough cleaning, some parts must be removed. **For optimum performance, clean all moving parts or sliding contact surfaces.** Avoid chlorine-based solvents, such as acetone or brake parts cleaner that may damage painted surfaces. Always follow the manufacturer's instructions when using any type of cleaning product.

⚠WARNING

Gasoline and petroleum products have low flash points and can explode or cause fire if used to clean machinery. DO NOT use these products to clean the machinery.

⚠CAUTION

Many cleaning solvents are toxic if inhaled. Minimize your risk by only using these products in a well ventilated area.

G2544—Solvent Cleaner & Degreaser
H9692—Orange Power Degreaser
Great products for removing shipping grease.

Figure 10. Cleaner/degreasers available from Grizzly.

Site Considerations

Floor Load

Refer to the **Model Specification Comparison** chart on **Page 5** for the weight and footprint specifications of your machine. Some residential floors may require additional reinforcement to support both the machine and operator.

Placement Location

Consider existing and anticipated needs, size of material to be processed through each machine, and space for auxiliary stands, work tables or other machinery when establishing a location for your new machine. See **Figures 11–12** for the minimum working clearances.

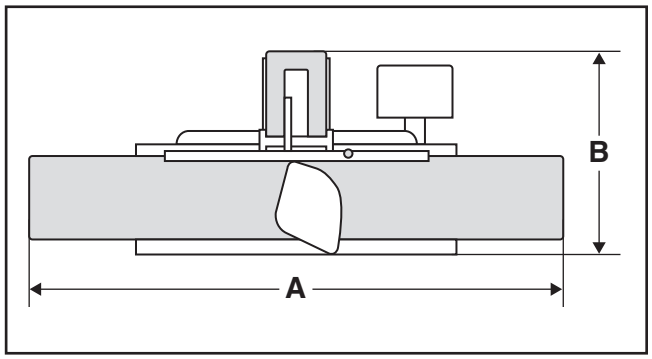
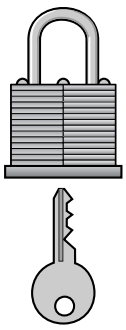


Figure 11. Minimum working clearances.

Model	A	B
G9860	80"	35"
G9860ZX	80"	35"
G9953	99½"	45½"
G9953ZX	99½"	45½"
G9953ZXF	99½"	45½"

Figure 12. Minimum working clearances by model.



⚠CAUTION

Children and visitors may be seriously injured if unsupervised around this machine. Lock entrances to the shop or disable start switch or power connection to prevent unsupervised use.

Mounting to Shop Floor

Although not required, we recommend that you mount your new machine to the floor. Because this is an optional step and floor materials may vary, floor mounting hardware is not included. Generally, you can either bolt your machine to the floor or mount it on machine mounts. Both options are described below. Whichever option you choose, it is necessary to level your machine with a precision level.

Bolting to Concrete Floors

Anchor studs and lag shield anchors with lag bolts (**Figure 13**) are two popular methods for anchoring an object to a concrete floor. We suggest you research the many options and methods for mounting your machine and choose the best that fits your specific application.

NOTICE

Anchor studs are stronger and more permanent alternatives to lag shield anchors; however, they will stick out of the floor, which may cause a tripping hazard if you decide to move your machine.

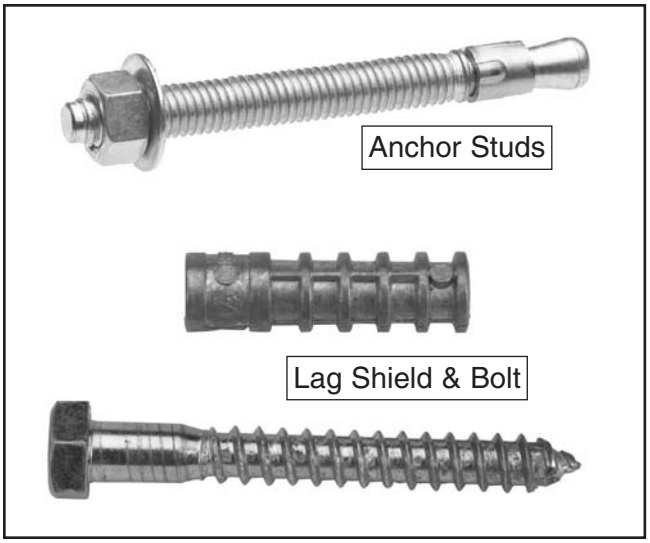


Figure 13. Typical fasteners for mounting to concrete floors.

Using Machine Mounts

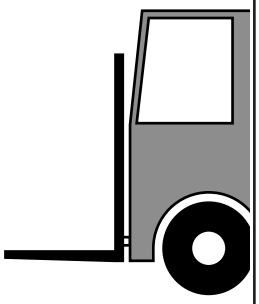
Using machine mounts, shown in **Figure 14**, gives the advantage of fast leveling and vibration reduction. The large size of the foot pads distributes the weight of the machine to reduce strain on the floor.

Figure 14. Machine mount example.

NOTICE

We strongly recommend securing your machine to the floor if it is hardwired to the power source. Consult with your electrician to ensure compliance with local codes.

Moving & Assembling Jointer



⚠WARNING

Your Extreme Series Jointer is a heavy machine. Serious personal injury may occur if safe moving methods are not used. To be safe, get assistance and use power equipment rated for at least 1500 lbs. to move the shipping crate and remove the machine from the crate.

Moving & Placing Jointer

1. Review the **Power Supply** section beginning on **Page 9** and **Mounting to Shop Floor** on **Page 15**, then prepare the permanent location for your jointer.

2. Remove the top and sides of the shipping crate, then place the small items aside in a safe location.

3. Remove the four pre-installed cap screws from the back of the jointer, then, with assistance, secure the pedestal to the jointer with these cap screws, as shown in **Figure 15**.

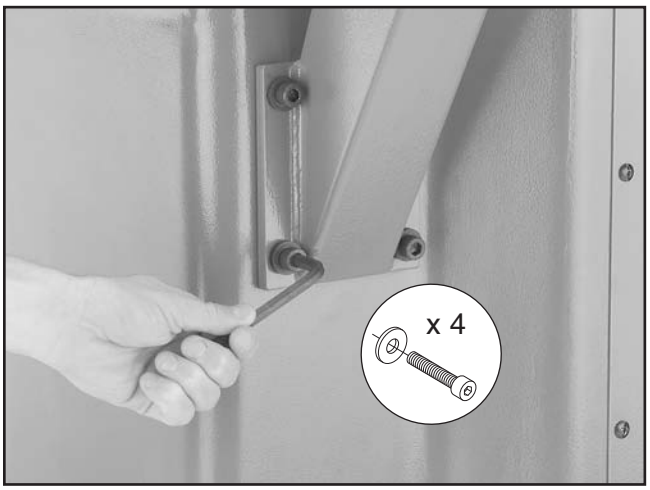


Figure 15. Installing control panel pedestal.

NOTICE

Make sure the straps do not touch the control panel pedestal in the next step. Also, make sure they stay under the base and do not slip to the infeed or outfeed tables to avoid damaging the machine.

4. Position the lifting straps under the ends of the cast iron base, as shown in **Figure 16**, then secure them to the power lifting equipment.

Figure 16. Lifting straps properly positioned.

5. Tension the lifting straps with the forklift to make sure they stay in place, then unbolt the jointer from the shipping pallet.

6. With assistance to steady the load, raise the jointer just enough to clear the shipping pallet and any floor obstacles, then move it to the prepared location.

Note: *In the next step, use shims between the base mounting points and the floor to avoid warping or cracking the cast iron.*

7. As you mount the jointer to the floor, use the precision level to make sure the table is level from side-to-side and from front-to-back.

Note: *Before the jointer was shipped from the factory, the infeed table was fully raised and the stop bolt was threaded up against the bottom of it to safely secure it during transit.*

To prevent damaging the table elevation gearing, you MUST adjust the position of the infeed stop bolt to the operating position before attempting to lower the infeed table.

NOTICE

To prevent damage to the table elevation gearing, NEVER force the table handwheels if you feel resistance. Check the positions of the stop bolts or for obstructions.

8. Loosen the jam nut (see **Figure 17**) on the infeed stop bolt, then unthread the stop bolt until the distance from the top of the bolt and the bottom of the infeed table is the same as the maximum depth of cut specified for your jointer (refer to the **Model Specification Comparison** chart for your model on **Page 5**).

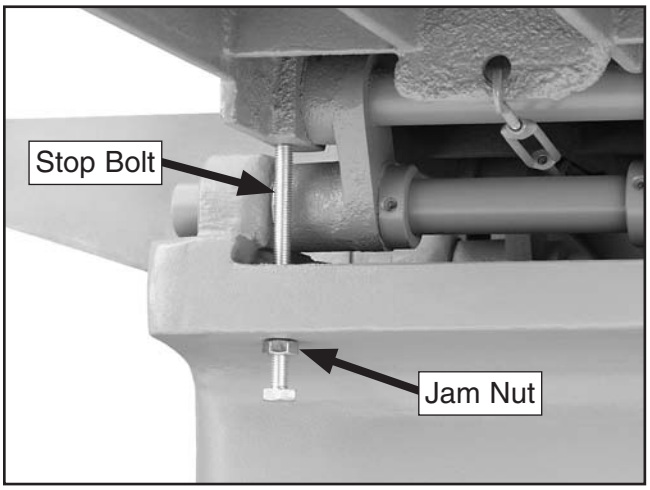


Figure 17. Infeed table stop bolt (viewed from underneath the table).

Installing Fence (G9860/G960ZX)

1. Remove the motor access panel on the back of the machine.

2. Remove the cap screws and lock washers that are pre-installed on the bottom of the fence support, then, with assistance, secure the support to the jointer with these cap screws and lock washers, as shown in **Figure 18**.

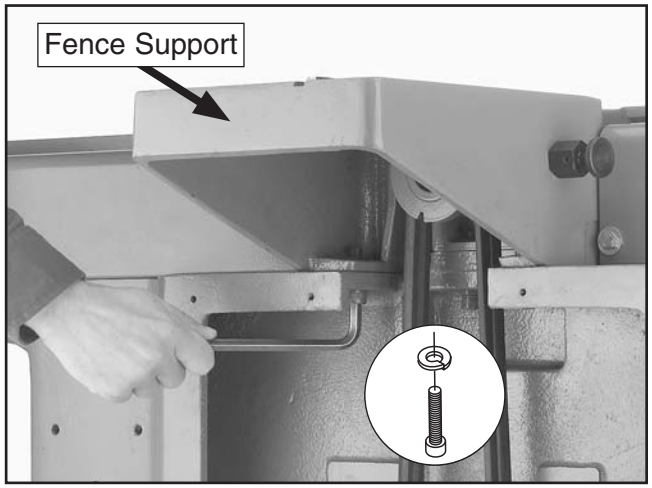


Figure 18. Installing the fence support.

3. Align the keyway underneath the fence support key (see **Figure 19**), then place the fence assembly on top of the support.

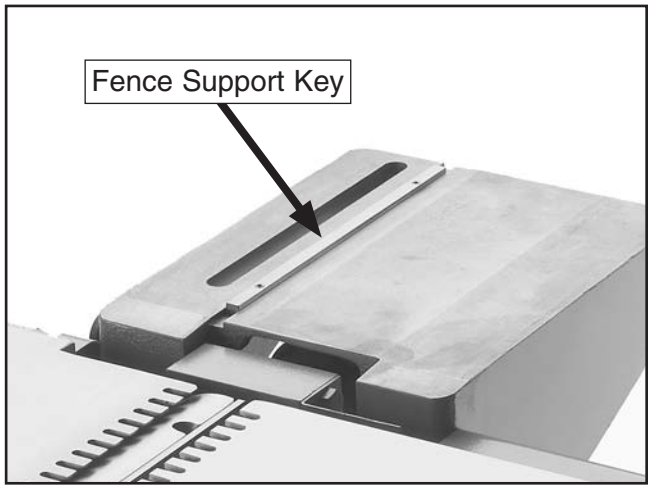


Figure 19. Fence support key.

4. Slide the flat washer onto the fence lock shaft, insert the shaft into the hole on the top of the fence assembly and through the slot of the support.

5. To secure the fence assembly, thread the T-slot nut onto the bottom of the lock shaft so that nut fits up into the slot of the fence support, as shown in **Figure 20**.

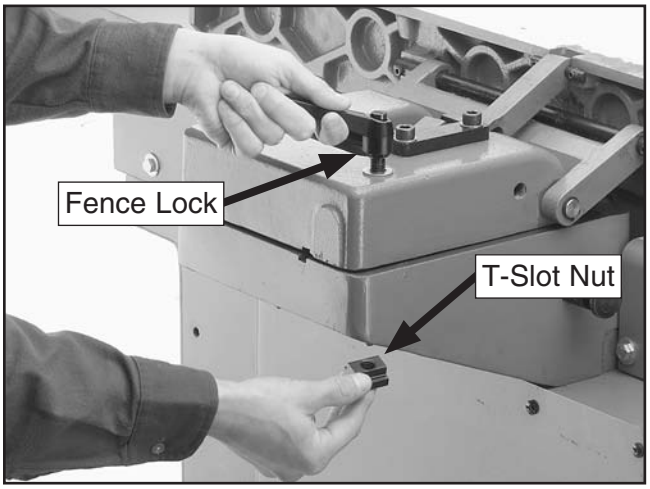


Figure 20. Installing the fence lock.

Installing Fence (G9953/G9953ZX/G9953ZXF)

1. Remove the six pre-installed cap screws and lock washers on either side of the fence base support (see **Figure 21**).

2. With assistance, place the fence assembly onto the fence base support.

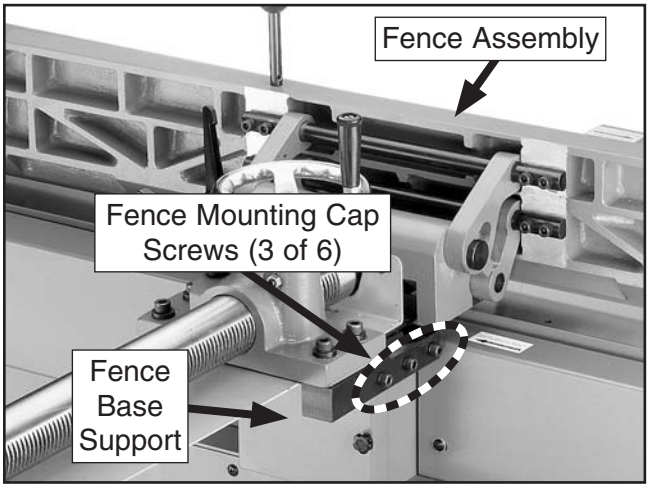


Figure 21. Fence assembly installed.

3. Secure the fence assembly with the six cap screws and lock washers removed in **Step 1**.

Adjusting Cutterhead Guard Tension

⚠WARNING

The cutterhead guard is a critical safety feature of this jointer. You MUST install and verify its operation before using the jointer! Failure to properly install this guard will greatly increase the risk of serious personal injury.

To adjust the cutterhead guard tension:

1. DISCONNECT MACHINE FROM POWER!

2. Loosen the lock knob shown in **Figure 22** that secures the cutterhead guard shaft.

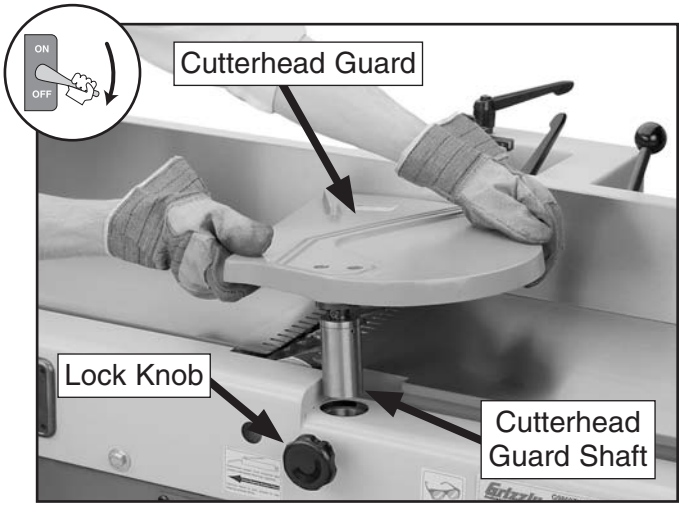


Figure 22. Installing the cutterhead guard.

3. Install the guard shaft into the mounting hole, then tighten the lock knob.

4. Lock the fence out of the way toward the back, then test the return tension of the guard by swinging it counterclockwise and releasing it.

   —If the guard does not return swiftly toward the fence, loosen the lock knob, lift the guard so the shaft clears the hole, rotate the guard clockwise, then re-install it and lock it in place.

5. Re-test and, if necessary, repeat **Step 4** until the guard has the correct tension.

Setting Outfeed Table Height

The outfeed table height MUST be even with the knives/cutters when they are at top-dead-center (TDC) to ensure safe operation and good results.

If the outfeed table is set too low, the workpiece will have increased snipe. If the outfeed table is set too high, the workpiece will hit the edge of the outfeed table and increase the risk of kickback.

To set the outfeed table height:

1. DISCONNECT JOINTER FROM POWER!

2. **Models G9860 & G9860ZX:** Remove the cutterhead guard, fence assembly, and rear motor access cover to access the cutterhead pulley.

   Models G9953, G9953ZX, & G9953ZXF: Remove the cutterhead guard and fence assembly, then open the rear cutterhead cover to access the cutterhead pulley.

⚠CAUTION

Cutterhead knives and inserts are extremely sharp and can quickly slice your hands or fingers. ALWAYS wear heavy leather gloves when handling these cutters to avoid personal injury.

3. Place the straightedge on the center of the outfeed table and over the cutterhead, then use the cutterhead pulley to rotate the cutterhead until the cutter edge is at the top-dead-center, as shown in **Figure 23**.

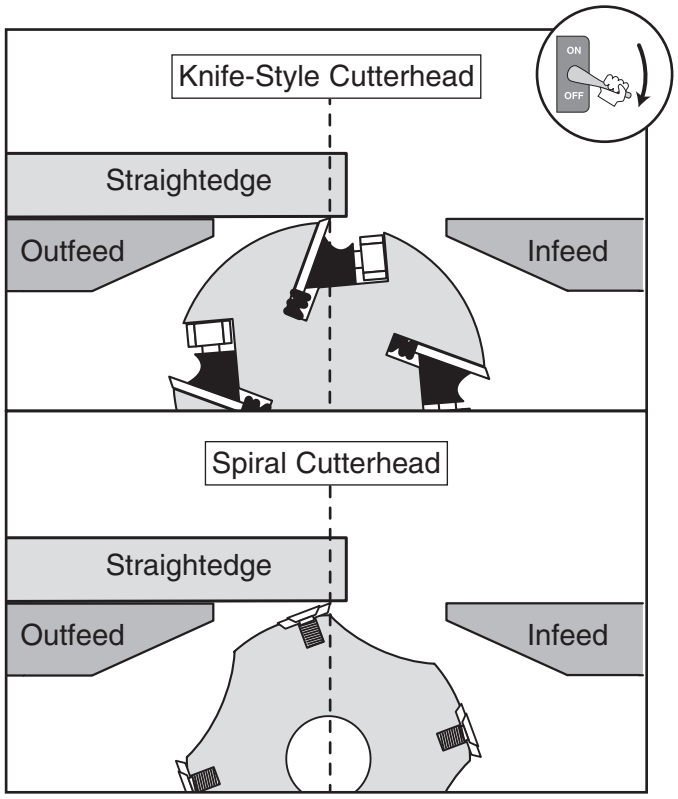


Figure 23. Cutter edge at top-dead-center.

Note: *On the knife-style cutterhead models, rotate the knurled knob on the cutterhead lock pin underneath the back of the fence assembly until it pops in toward the cutterhead. As you rotate the cutterhead pulley, the pin will engage one of the four indents on the stop plate and lock the cutterhead in the correct position for this procedure (see* ***Figure 24****). To disengage the pin, pull it out and rotate it ½ turn.*

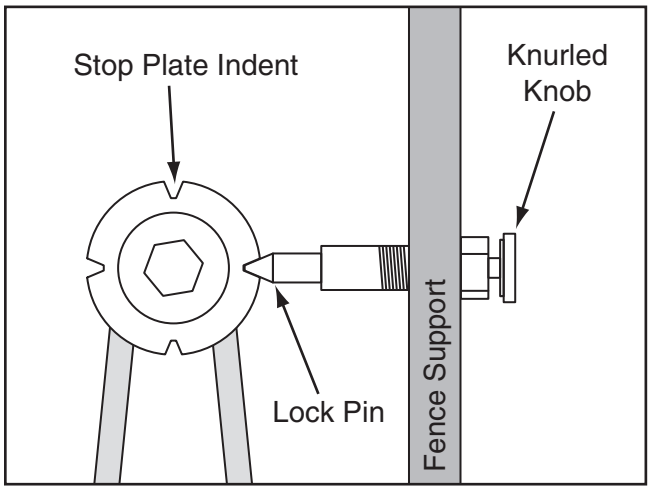


Figure 24. Cutterhead lock pin engaged.

4. When the outfeed table height is correctly set and the cutter is at the top of its rotation, the cutter edge will just touch the straightedge without lifting it.

Note: *Use the cutterhead pulley to rock the cutterhead back-and-forth to make sure the cutter is at TDC.*

—If your outfeed table height is correctly set, no further adjustments are necessary. Continue with **Step 6**.

—If the height setting is not correct, continue with **Step 5**.

5. Loosen the outfeed table lock and rotate the handwheel until the cutter edge just touches the straightedge when at TDC, then tighten the table lock.

⚠CAUTION

The outfeed table MUST be even with the cutter edges to reduce the risk of kickback and to help ensure good cutting results.

Tip: Some advanced woodworkers have found that they can virtually eliminate snipe by setting the outfeed table in the following manner: Perform **Steps 1–5**. Then lower the outfeed table slightly so the knife or insert lifts the straightedge off the table. Place a ruler next to the straightedge and rotate the cutterhead, watching how far the carbide insert pulls the straightedge. Adjust the outfeed table and recheck until the knife or insert moves the straightedge only 5⁄32".

6. Loosen the jam nut and adjust the outfeed stop bolt underneath the table so that it just touches the bottom of the tables, as shown in **Figure 25**, then re-tighten the jam nut.

Note: *When adjusted to the correct outfeed table height, use the stop bolt for a convenient method of ensuring the outfeed table is set at the proper height.*

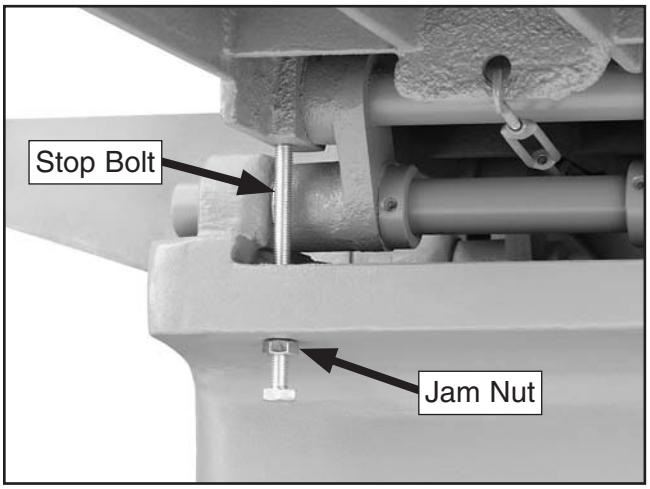


Figure 25. Table stop bolt (viewed from underneath the table).

7. Re-install the motor access cover, fence assembly, and cutterhead guard.

Dust Collection

⚠CAUTION

DO NOT operate your jointer without an adequate dust collection system. This machine creates substantial amounts of wood dust while operating. Failure to use a dust collection system can result in short and long-term respiratory illness.

Recommended CFM at Dust Port: 400 CFM
Do not confuse this CFM recommendation with the rating of the dust collector. To determine the CFM at the dust port, you must consider these variables: (1) CFM rating of the dust collector, (2) hose type and length between the dust collector and the machine, (3) number of branches or wyes, and (4) amount of other open lines throughout the system. Explaining how to calculate these variables is beyond the scope of this manual. Consult an expert or purchase a good dust collection "how-to" book.

To connect a dust collection hose:

1. Fit a 4" dust hose over the dust port, as shown in **Figure 26**, then secure it in place with a hose clamp.

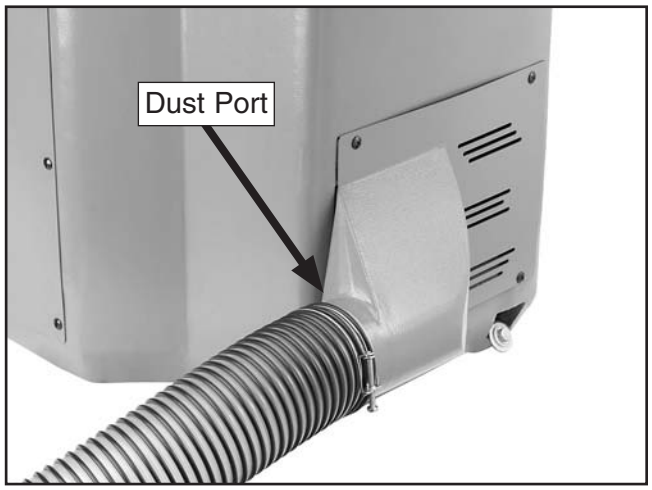


Figure 26. Dust hose attached to dust port.

2. Tug the hose to make sure it does not come off. **Note:** *A tight fit is necessary for proper performance.*

Test Run

Once the assembly is complete, test run your machine to make sure it runs properly and is ready for regular operation. The test run consists of verifying the following: 1) The motor powers up and runs correctly, 2) the stop button safety feature works correctly, and, if equipped, 3) the cutterhead brake works properly.

If, during the test run, you cannot easily locate the source of an unusual noise or vibration, stop using the machine immediately, then review **Troubleshooting** on **Page 36**.

If you cannot find a remedy, contact our Tech Support at (570) 546-9663 for assistance.

⚠WARNING

Before starting the jointer, make sure you have performed the preceding assembly and adjustment instructions, and you have read through the rest of the manual and are familiar with the various functions and safety features on this machine. Failure to follow this warning could result in serious personal injury or even death!

To test run the machine:

1. Make sure you understand the safety instructions at the beginning of the manual and that the machine is set up properly.

2. Make sure all tools and objects used during setup are cleared away from the machine.

3. Push the stop button in, then twist it clockwise so it pops out. When the stop button pops out, the switch is reset and ready for operation (see **Figures 27–28**).

OFF Button

Figure 27. Resetting the stop button.

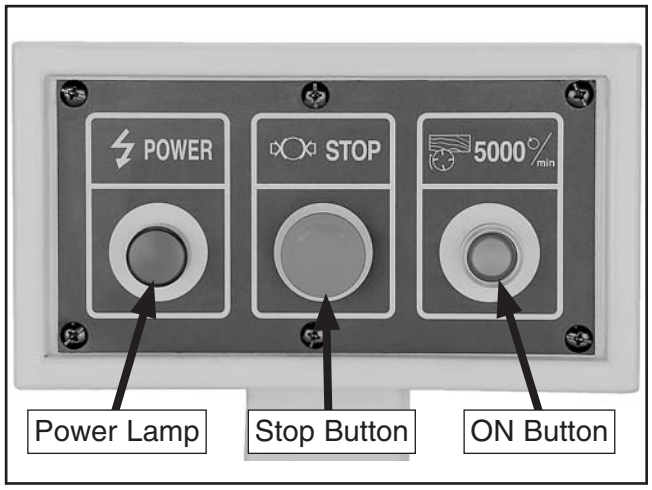


Figure 28. Control panel.

4. Verify that the outfeed table height is properly set (refer to **Setting Outfeed Table Height** on **Page 19**).

5. Connect the machine to the power source.

6. Verify that the machine is operating correctly by pushing the ON button.

   —When operating correctly, the machine runs smoothly with little or no vibration or rubbing noises.

   —Investigate and correct strange or unusual noises or vibrations before operating the machine further. Always disconnect the machine from power when investigating or correcting potential problems.

7. If equipped on your jointer, rotate the cutterhead brake handle to stop the machine and cutterhead.

   —If the machine does not turn ***OFF***, use the stop button to turn it ***OFF*** and immediately disconnect power to the machine. The cutterhead brake feature is not working correctly. This safety feature must work properly before proceeding with regular operations. Call Tech Support for help.

8. **Model G9953ZXF Only:** Press the stop button to turn the machine ***OFF*** and observe the cutterhead rotation.

   —If the cutterhead is rotating counterclockwise (from right-to-left), the motor is wired out of phase. Disconnect the jointer from power, then switch any two hot leads coming from the power source.

9. If not already done, use the stop button to turn the machine ***OFF***.

10. WITHOUT resetting the stop switch, press the ON button. The machine should not start.

    —If the machine does not start, the stop button safety feature is working correctly. The **Test Run** is complete.

    —If the machine does start (with the stop button pushed in), immediately disconnect power to the machine. The stop button safety feature is not working correctly. This safety feature must work properly before proceeding with regular operations. Call Tech Support at (570) 546-9663 for help.

Recommended Adjustments

For your convenience, the adjustments listed below have been performed at the factory and no further setup is required to operate your machine.

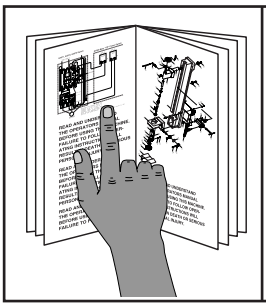
However, because of the many variables involved with shipping, we recommend that you at least verify the following adjustments to ensure the best possible results from your new machine.

Step-by-step instructions for these adjustments can be found in the **SERVICE** section, beginning on **Page 36**.

Factory adjustments that should be verified:

- Table Parallelism (**Page 44**).
- Model G9860 & G9953 Knife Height (**Page 39**).

SECTION 4: OPERATIONS

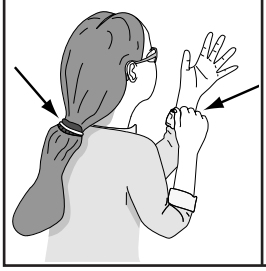


⚠WARNING

To reduce the risk of serious injury when using this machine, read and understand this entire manual before beginning any operations.

⚠WARNING

Damage to your eyes, lungs, and ears could result from using this machine without proper protective gear. Always wear safety glasses, a respirator, and hearing protection when operating this machine.



⚠WARNING

Loose hair, clothing, or jewelry could get caught in machinery and cause serious personal injury. Keep these items away from moving parts at all times to reduce this risk.

Basic Controls

Refer to **Figures 29–33** and the following descriptions to become familiar with the functions of the control panel, table controls, and fence controls.

Control Panel

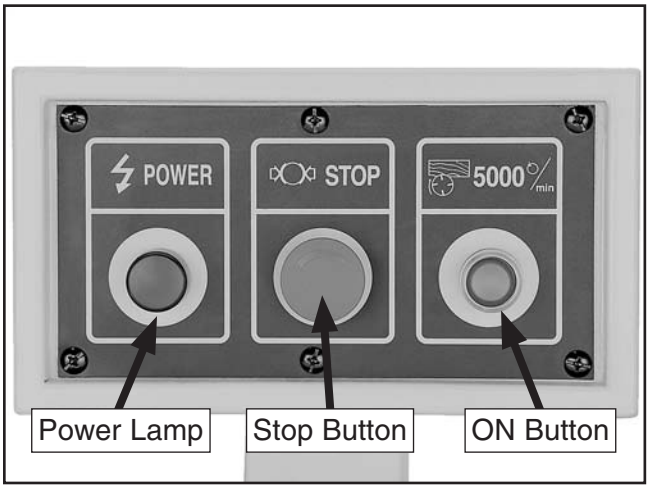


Figure 29. Control panel.

Power Lamp: Lights when the machine is connected to power.

Stop Button: Turns the motor ***OFF***. This button does NOT disconnect the machine from power!

ON Button: Turns the motor ***ON***. The stop button must be reset before this button will work.

Table Controls

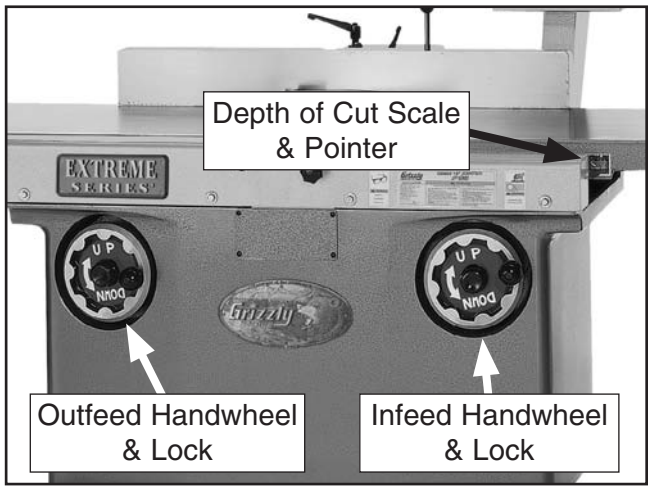


Figure 30. Table controls.

Depth of Cut Scale & Pointer: Indicates the amount of workpiece surface that will be removed. Marked in 1/16" increments.

Infeed & Outfeed Handwheels & Locks: Raises and lowers the respective table. Rotate the handwheels clockwise to raise and counterclockwise to lower the table. Tighten the lock knob in the center of the handwheel to secure the setting.

Fence Controls

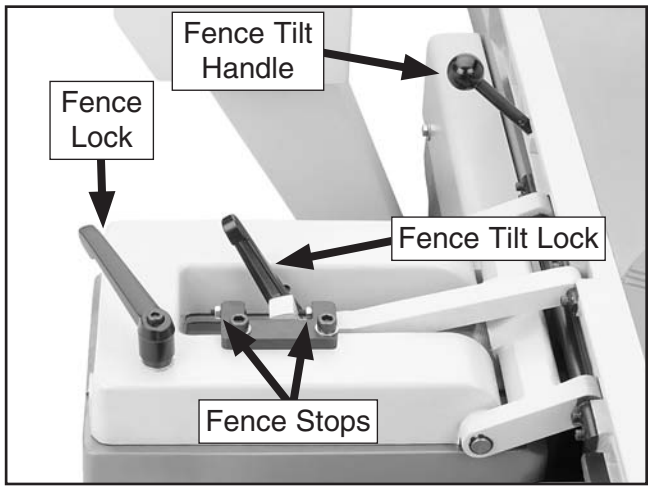


Figure 31. Fence controls (Model G9860 and G9860ZX).

Fence Lock: Locks the fence assembly in place.

Fence Tilt Handle: Tilts the fence when the tilt lock is loose.

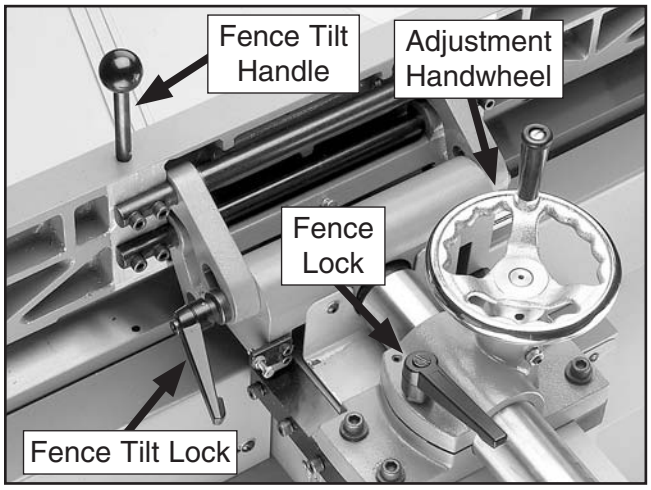


Figure 32. Fence controls (Models G9953, G9953ZX, and G9953ZXF).

Fence Tilt Lock: Locks the fence tilt angle in place when tightened.

Fence Stops: Provide positive stops for the fence at 90° and 45°

Fence Adjustment Handwheel (Model G9953/G9953ZX/G9953ZXF): Moves the fence forward and back when rotated.

Cutterhead Brake (G9953/G9953ZX/G9953ZXF Only)

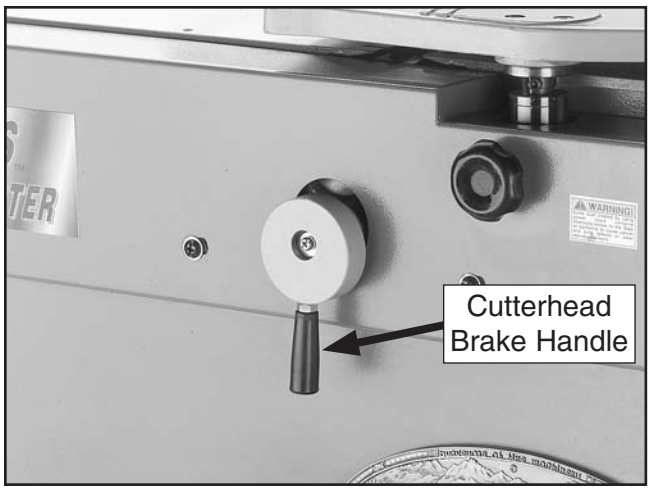


Figure 33. Cutterhead brake.

Cutterhead Brake: Turns the machine ***OFF*** and brings the cutterhead to a rapid stop when the handle is rotated.

Stock Inspection & Requirements

Follow these rules when choosing and jointing stock:

- **DO NOT joint or surface place stock that contains large or loose knots.** Injury to the operator or damage to the workpiece can occur if a knot becomes dislodged during the cutting operation.

- **Jointing and surface planing with the grain is safer for the operator and produces a better finish.** Cutting against the grain increases the likelihood of kickback and workpiece tear-out. DO NOT cut against the grain! Cutting with the grain is feeding the stock across the cutterhead so the grain points down and toward you, as viewed from the edge of the stock (see **Figure 34**).

  Note: *If the grain changes direction along the edge of the workpiece, decrease the depth of cut and make additional passes.*

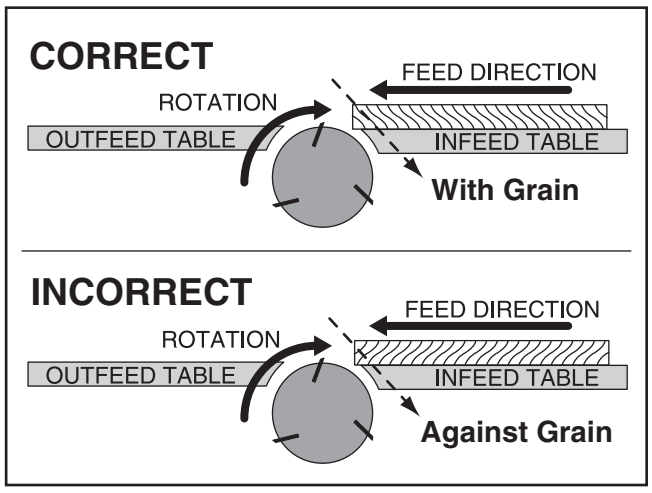


Figure 34. Proper grain alignment with the cutterhead.

- **Only process natural wood fiber through your jointer.** Your jointer is designed to cut only natural wood stock. Attempting to process any other synthetic or natural material will damage the cutterhead and cause injury hazards for the operator.

- **Scrape all glue off the workpiece before jointing.** Glue deposits on the workpiece, hard or soft, will gum up the cutterhead and produce poor results.

- **Remove foreign objects from the workpiece.** Make sure that any stock you process with the jointer is clean and free of dirt, nails, staples, tiny rocks or any other foreign objects, that could damage the cutterhead. These particles could also cause a spark as they strike the cutterhead and create a fire hazard.

  Note: *Wood stacked on a concrete or dirt surface can have small pieces of concrete or stone pressed into the surface.*

- **Make sure all stock is sufficiently dried before jointing.** Wood with a moisture content over 20% will cause unnecessary wear on the cutters and poor cutting results. Excess moisture can also hasten rust and corrosion.

- **Make sure your workpiece exceeds the minimum dimension requirements, as shown in Figure 35, before processing it through the jointer, or the workpiece may break or kick back during the operation.**

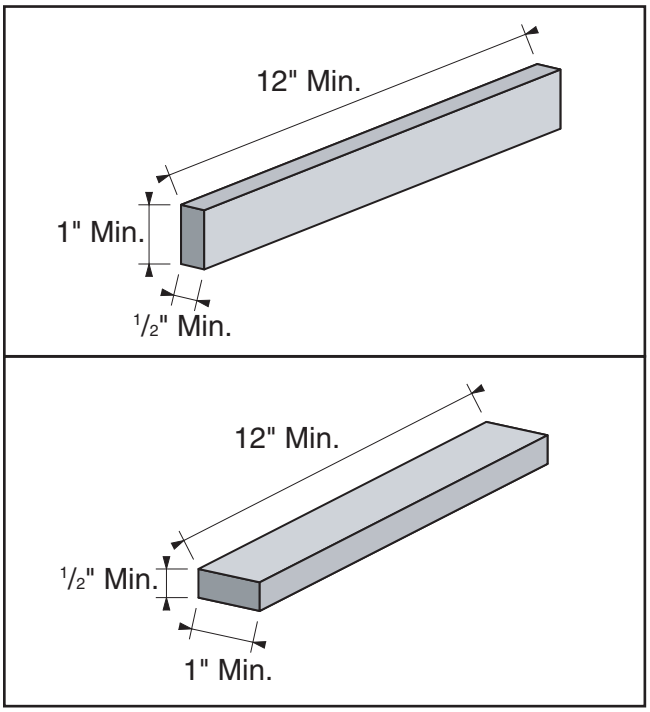


Figure 35. Minimum stock dimensions for the jointer.

⚠WARNING

Before turning the jointer *ON*, make sure the outfeed table height is properly set (refer to Page 19 for detailed instructions) to avoid workpiece kickback and to ensure good results. Kickback of the workpiece could cause serious personal injury!

Squaring Stock

Squaring stock involves four steps performed in the following order:

1. **Surface Plane on the Jointer:** The concave face of the workpiece is surface planed flat with the jointer (see **Figure 36**).

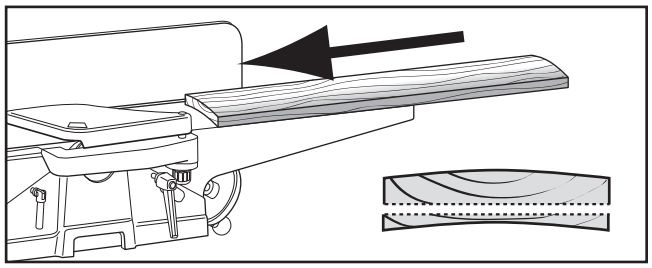


Figure 36. Surface planing on the jointer.

2. **Surface Plane on a Thickness Planer:** The opposite face of the workpiece is surface planed flat with a thickness planer (see **Figure 37**).

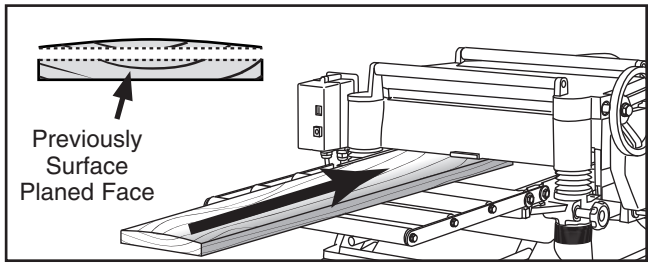


Figure 37. Surface planing on a thickness planer.

3. **Edge Joint on the Jointer:** The concave edge of the workpiece is jointed flat with the jointer (see **Figure 38**).

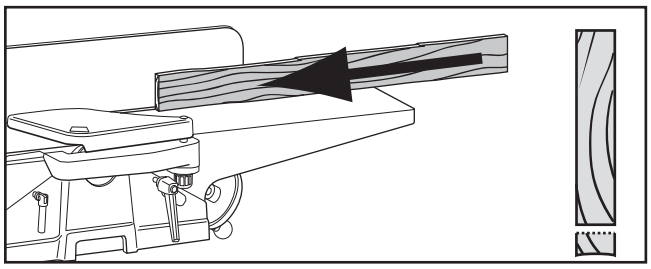


Figure 38. Edge jointing on the jointer.

4. **Rip Cut on a Table Saw:** The jointed edge of the workpiece is placed against the table saw fence and the opposite edge is cut off (see **Figure 39**).

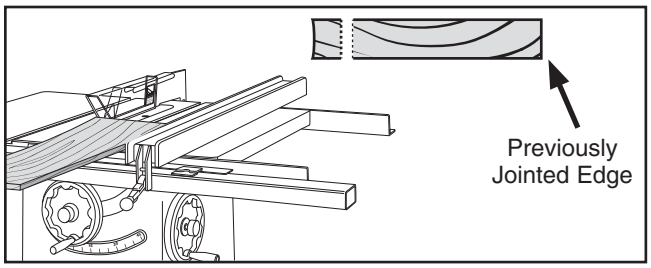


Figure 39. Rip cutting on a table saw.

⚠WARNING

Making adjustments to the jointer while the machine is *ON* greatly increases the risk to the operator from the rotating cutterhead. ALWAYS make sure the jointer is *OFF* and disconnected from power before performing adjustments, maintenance, or service on the machine!

Surface Planning

The purpose of surface planing on the jointer is to make one face of the workpiece flat (see **Figures 40–41**). This is a necessary step when squaring a workpiece for a thickness planer.

NOTICE

If you are not experienced with a jointer, set the depth of cut to 0" and practice feeding the workpiece across the tables as described for each of the jointing procedures. This process will better prepare you for the actual operation.

Figure 40. Example of surface planing with the jointer.

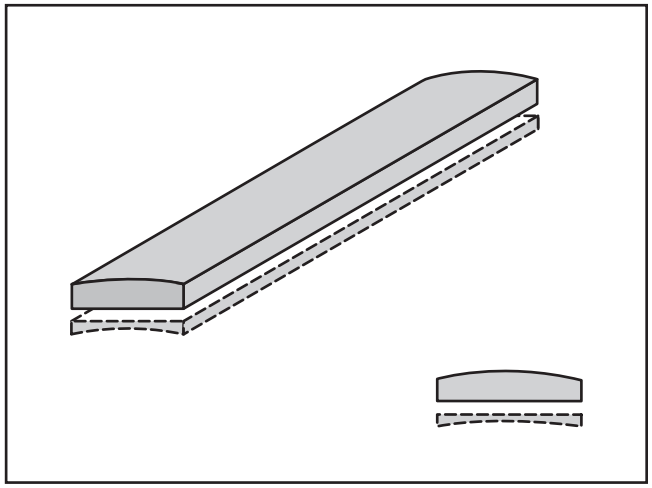


Figure 41. Illustration of surface planing results.

To surface plane the workpiece on the jointer:

1. DISCONNECT JOINTER FROM POWER!

2. Make sure you read and follow the **Safety Instructions** beginning on **Page 6** and the **Stock Inspection & Requirement** rules beginning on **Page 26**.

3. Verify that the outfeed table height is properly set (refer to **Setting Outfeed Table Height** on **Page 19**).

4. Set the depth of cut for your operation and the fence to 90°.

   Note: *We suggest a 1/32" depth of cut for surface planing, and a more shallow depth for hardwood species or for wide stock.*

5. If your workpiece is cupped or warped, place it so the concave side is face down on the infeed table.

6. Connect the jointer to power and turn it ***ON***.

⚠WARNING

Failure to use push blocks when surface planing could result in your hands contacting the rotating cutterhead, which will cause serious personal injury. ALWAYS use push blocks when surface planing on the jointer!

7. With a push block in each hand, press the workpiece against the infeed table and the fence with firm pressure, then feed the workpiece over the cutterhead.

   Note: *When your leading hand comes within 4" of the cutterhead, lift that push block up and place it on the workpiece portion that is on the outfeed table. Now, focus the downward pressure with the leading hand while feeding, then repeat the same action with your trailing hand when it comes within 4" of the cutterhead. Keep your hands safe! DO NOT allow them to get any closer than 4" to the cutterhead.*

8. Repeat **Step 7** until the entire workpiece surface is flat.

Edge Jointing

The purpose of edge jointing is to produce a finished, flat-edged workpiece surface that is suitable for joinery or finishing (see **Figures 42–43**). It is also a necessary step when squaring rough or warped stock.

Figure 42. Example of edge jointing operation.

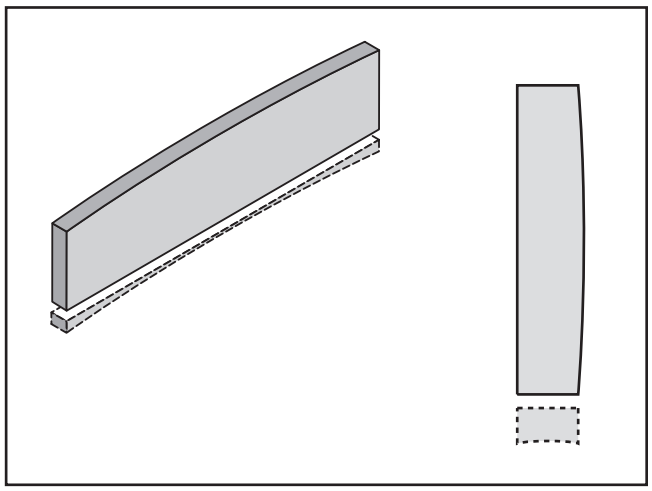


Figure 43. Illustration of edge jointing results.

To edge joint on the jointer:

1. DISCONNECT JOINTER FROM POWER!

2. Make sure you read and follow the **Safety Instructions** beginning on **Page 6** and the **Stock Inspection & Requirement** rules beginning on **Page 26**.

3. Verify that the outfeed table height is properly set (refer to **Setting Outfeed Table Height** on **Page 19**).

4. Set the depth of cut for your operation and the fence to 90°.

   Note: *We suggest 1/16"–1/8" depth of cut for edge jointing, and a more shallow depth for hardwood species or for wide stock.*

5. If your workpiece is cupped or warped, place it so the concave side is face down on the infeed table.

6. Connect the jointer to power and turn it ***ON***.

7. With a push block in each hand, press the workpiece against the infeed table and the fence with firm pressure, then feed the workpiece over the cutterhead.

   Note: *When your leading hand comes within 4" of the cutterhead, lift that push block up and place it on the workpiece portion that is on the outfeed table. Now, focus the downward pressure with the leading hand while feeding, then repeat the same action with your trailing hand when it comes within 4" of the cutterhead. Keep your hands safe! DO NOT allow them to get any closer than 4" to the cutterhead.*

8. Repeat **Step 7** until the entire workpiece edge is flat.

Bevel Cutting

The purpose of bevel cutting on the jointer is to cut a specific angle of the workpiece edge (see **Figures 44–45**.

Your jointer has fence stops that can be set at 90° or 45°. If your operation requires a different angle, the fence can be locked in place anywhere between these angles.

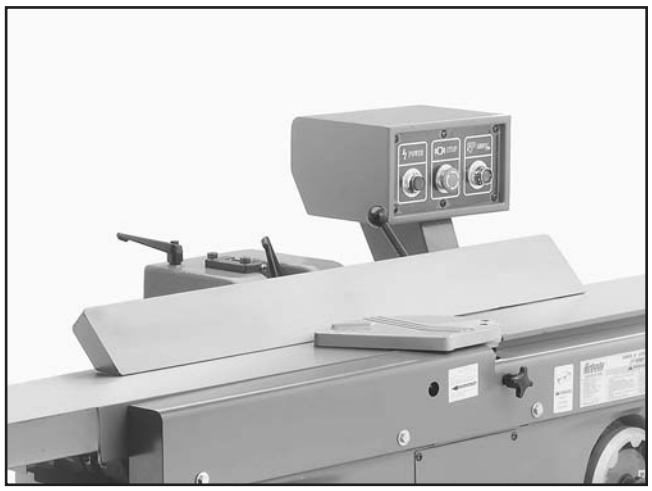


Figure 44. Fence setup for a bevel cut of 45°.

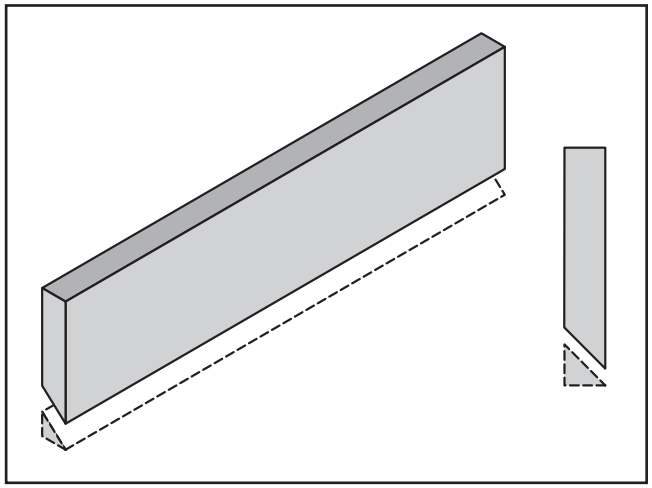


Figure 45. Illustration of bevel cutting results.

To bevel cut on the jointer:

1. DISCONNECT JOINTER FROM POWER!

2. Make sure you read and follow the **Safety Instructions** beginning on **Page 6** and the **Stock Inspection & Requirement** rules beginning on **Page 26**.

3. Verify that the outfeed table height is properly set (refer to **Setting Outfeed Table Height** on **Page 19**).

4. Set the depth of cut for your operation and the fence to the required angle.

   Note: *We suggest 1/16"–1/8" depth of cut for bevel cutting, and a more shallow depth for hardwood species or for wide stock.*

5. If your workpiece is cupped or warped, place it so the concave side is face down on the infeed table.

6. Connect the jointer to power and turn it ***ON***.

7. With a push block in each hand, press the workpiece against the infeed table and the fence with firm pressure, then feed the workpiece over the cutterhead.

   Note: *When your leading hand comes within 4" of the cutterhead, lift that push block up and place it on the workpiece portion that is on the outfeed table. Now, focus the downward pressure with the leading hand while feeding, then repeat the same action with your trailing hand when it comes within 4" of the cutterhead. Keep your hands safe! DO NOT allow them to get any closer than 4" to the cutterhead.*

8. Repeat **Step 7** until the bevel cut is satisfactory.

SECTION 5: ACCESSORIES

H9815—Power Twist® V-Belt - ½" x 48"
Smooth running with less vibration and noise than solid belts. The Power Twist® V-belt can be customized in minutes to any size—just add or remove sections to fit your needs. Size: ½" x 48"; replaces all "A" sized V-belts. Requires two Power Twist® V-belts to replace the stock V-belt on Models G9953, G9953ZX, and G9953ZXF.

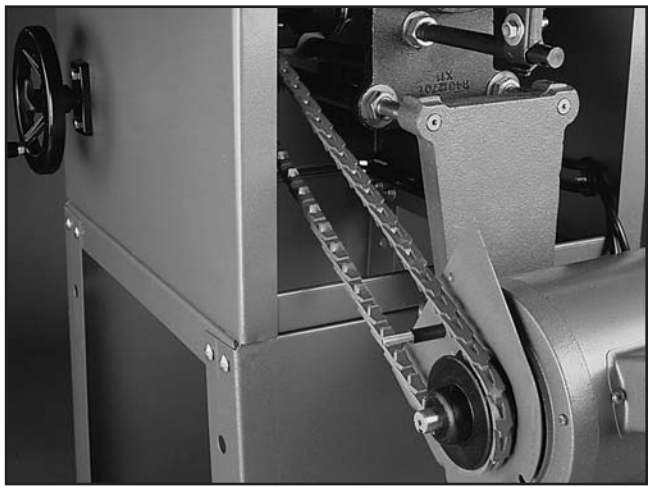


Figure 46. H9815 Power Twist® V-Belt.

H7319—Carbide Indexable Insert, 10 Pk.
These indexable carbide inserts can be rotated to provide four factory sharp edges before replacement. 14mm x 14mm x 2mm.

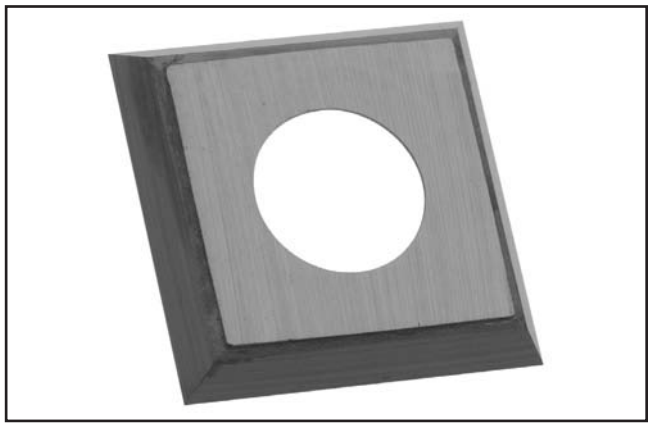


Figure 47. Carbide indexable insert for the spiral cutterheads.

Call 1-800-523-4777 To Order

H7288—12" Dispoz-A-Blade® System (Includes 4 Holders & Knife Inserts)
H5143—12" Cobalt Dispoz-A-Blade® Knife Inserts (Set of 4)
H2253—16" Dispoz-A-Blade® System (Includes 4 Holders & Knife Inserts)
H2267—16" Cobalt Dispoz-A-Blade® Knife Inserts (Set of 4)
Install a Dispoz-A-Blade® Knife system in your new jointer and save up to 70% on knife replacements for the life of your jointer. Each knife insert is double-edged, so you get two knives in one, and is indexed so that all knife inserts can be installed at the same height in just minutes. Yes, that means you can throw away the knife jig!

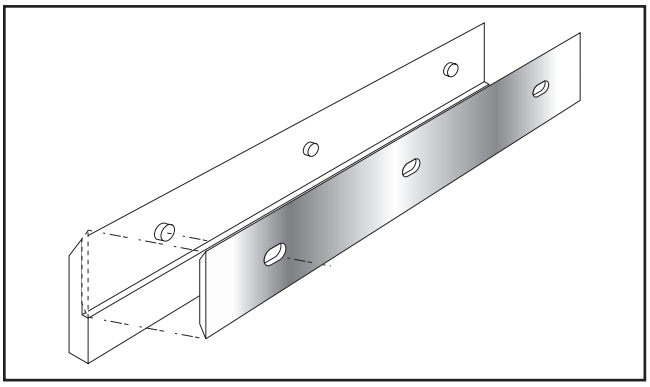


Figure 48. Dispoz-A-Blade® Holder and Knife.

G4181—Power Feeder, 1 HP Single-Phase
G7873—Power Feeder, 1 HP 3-Phase
These industrial power feeders feature 4 speeds forward or reverse, X Y Z adjustable, and three synthetic rubber rollers. 220V.

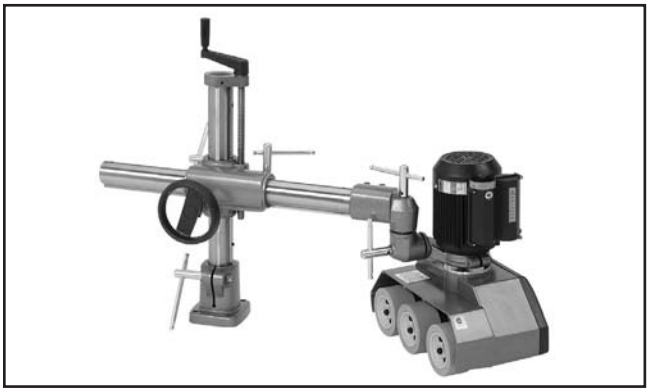


Figure 49. 1 HP Power Feeder.

T20501—Face Shield Crown Protector 4"
T20502—Face Shield Crown Protector 7"
T20503—Face Shield Window
T20452—"Kirova" Anti-Reflective S. Glasses
T20451—"Kirova" Clear Safety Glasses
H0736—Shop Fox® Safety Glasses
H7194—Bifocal Safety Glasses 1.5
H7195—Bifocal Safety Glasses 2.0
H7196—Bifocal Safety Glasses 2.5

Figure 50. Eye protection assortment.

T20514—Small Half-Mask Respirator
T20515—Medium Half-Mask Respirator
T20516—Large Half-Mask Respirator
T20511—Pre-Filter P100
T20539—Cartridge Filter 2PK P100
T20541—Cartridge Filter 2PK P100 & O Vapor
Wood and other types of dust can cause severe respiratory damage. If you work around dust everyday, a half-mask respirator can greatly reduce your risk. Compatible with safety glasses!

Figure 51. Half-mask respirator with disposable cartridge filters.

Call 1-800-523-4777 To Order

G5562—SLIPIT® 1 Qt. Gel
G5563—SLIPIT® 12 oz Spray
G2871—Boeshield® T-9 12 oz Spray
G2870—Boeshield® T-9 4 oz Spray
H3788—G96® Gun Treatment 12 oz Spray
H3789—G96® Gun Treatment 4.5 oz Spray

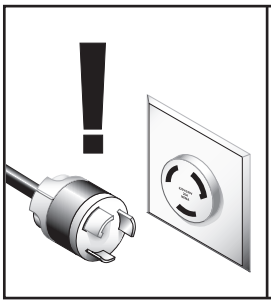
Figure 52. Recommended products for protecting unpainted cast iron/steel part on machinery.

G0440—2 HP Cyclone Dust Collector
G0443—1½ HP Cyclone Dust Collector

Figure 53. Model G0443 Cyclone Dust Collector

Cyclone action separates the heavy dust particles from the fine particles and drops them into the 35 gallon steel drum. Any remaining fine dust travels past the impeller and is then trapped by a cartridge filter made of spun-bond polyester that filters 99.9% of particles from 0.2 to 2 microns in size. The cartridge filter is pleated to provide 96 sq. ft. of surface area for efficient air movement and a clear plastic bag collect the fine cake that shakes off the filter. Casters mounted to the drum also make disposal of the larger chips and dust as easy as it gets. Other features include: TEFC Class "F" 1-1/2 HP 110V/220V (prewired 110V) single-phase motor, 360° blower rotation for easy connection to your duct system, magnetic switch with timer options and a remote control, 16 gauge steel cyclone body, and 1025 CFM suction capacity.

SECTION 6: MAINTENANCE



⚠WARNING

Always disconnect power to the machine before performing maintenance. Failure to do this may result in serious personal injury.

Schedule

For optimum performance from your machine, follow this maintenance schedule and refer to any specific instructions given in this section.

Daily Maintenance:
- Check for loose mounting bolts.
- Check/replace/sharpen damaged or dull cutters.
- Check/repair/replace worn or damaged wires.
- Check/resolve any other unsafe condition.
- Clean the tables and exterior of machine.

Every 40 Hours of Operation:
- Check for V-belt tension, damage, or wear (**Page 35**).
- Clean/vacuum dust buildup from inside the cabinet and off the motor.
- Lubricate the pivot points of the fence assembly (**Page 34**).
- Lubricate the cutterhead bearing blocks (**Page 34**).

Every 160 Hours of Operation:
- Lubricate the table elevation gears and leadscrew (**Page 34**).

Note: *This maintenance schedule is based on average usage. Adjust the maintenance schedule to match your actual usage to keep your jointer running smoothly and to protect your investment.*

Cleaning & Protecting

Use a brush and shop vacuum to remove chips and debris from the jointer. Wipe the tables clean after every use—this ensures moisture from wood dust does not remain on bare metal surfaces.

Remove any rust from the unpainted cast iron surfaces of your jointer, then treat them with regular applications of products such as G96® Gun Treatment, SLIPIT®, or Boeshield® T-9 (see **Section 5: Accessories** on **Page 32** for more details).

Lubrication

Other than lubrication points covered in this section, all other bearings are internally lubricated and sealed at the factory. Simply leave them alone unless they need to be replaced.

An essential step for lubrication is cleaning the components before lubricating them. This idea is critical because dust and chips build up on lubricated components and make the them hard to move. Simply adding more grease to the components with built-up grime on them will not yield smooth moving components.

Clean the components in this section with an oil/grease solvent or mineral spirits. Make sure the surfaces are dry before applying additional lubricant.

DISCONNECT THE MACHINE FROM POWER BEFORE PERFORMING LUBRICATION!

Fence Assembly Pivot Points

Lubricant	Frequency	Qty
ISO 68 Oil or Equivalent	Every 40 Hours of Operation	1–2 Drops

The fence assembly has many metal-to-metal pivot points. Use a shop rag and mineral spirits to clean away debris and grime from these points. Add a small amount of lubricant, then move the component to distribute the lubricant.

Cutterhead Bearing Blocks

Lubricant	Frequency	Qty
NLGI #2 or Equivalent	Every 40 Hours of Operation	1 Pump

The cutterhead bearing blocks are located on either end of the cutterhead (refer to **Cutterhead Breakdown** on **Pages 54 & 61** for detailed illustrations). The grease fitting for the front bearing block is accessed through a hole in the front table cover. To access the grease fitting for the back bearing block, you must remove the fence.

Clean debris and grime from the grease fitting and the surrounding area, then use a grease pump to add lubricant.

Table Elevation Gears & Leadscrew

Lubricant	Frequency	Qty
NLGI #2 or Equivalent	Every 160 Hours of Operation	1 Pump

Remove the rear motor access cover to access the elevation gears for the infeed and outfeed tables (see **Figure 54**). Use shop rags, a stiff brush, and mineral spirits to clean away the built-up grime from the gears and elevation leadscrew, then brush on a thin coat of lubricant to these parts.

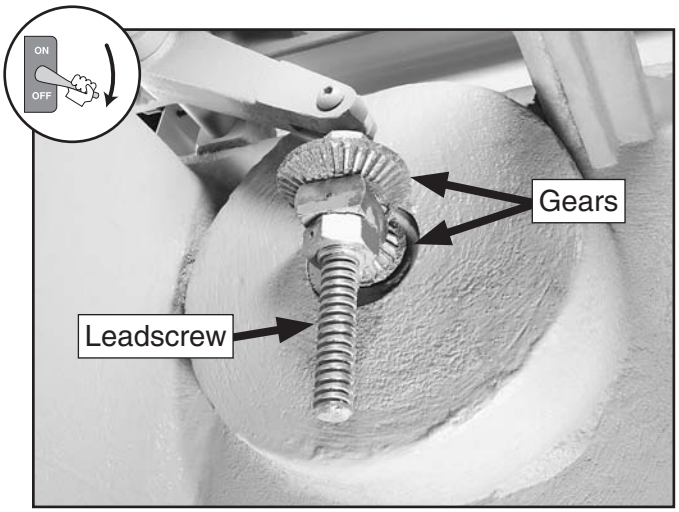


Figure 54. Table elevation gears and leadscrew.

V-Belts

V-belts will wear and stretch with extended use. Maintaining proper tension of V-belts and making sure they are in good condition will increase the efficiency of the cutterhead and reduce wear on the bearings.

When a V-belt can no longer be properly tensioned or is cracked/damaged, replace both V-belts as a matched set.

Tools Needed	**Qty**
Phillips Screwdriver	1
Wrench or Socket 19mm	1

To properly tension the V-belts:

1. DISCONNECT JOINTER FROM POWER!

2. Remove the rear access motor cover to access the V-belts (see **Figure 55**).

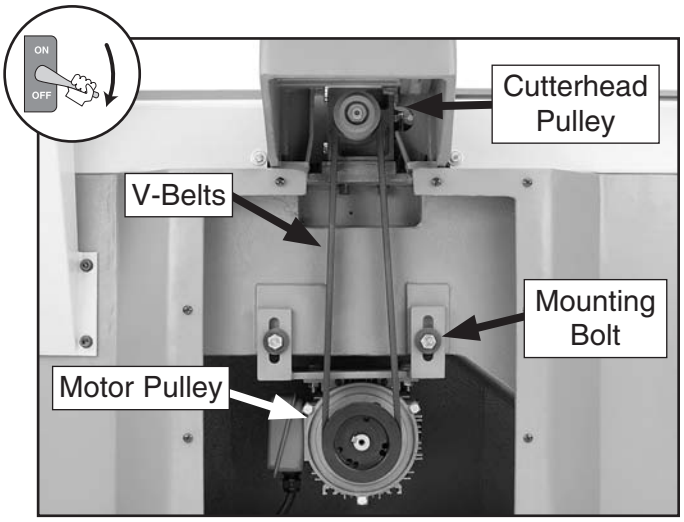


Figure 55. V-belts and pulleys.

3. Loosen the two motor mounting bolts, then, with assistance, raise or lower the motor assembly until there is the proper tension on the V-belts.

Note: *The V-belts are properly tensioned when there is approximately ¾" of deflection between the pulleys when moderate pressure is applied with your finger, as shown in* ***Figure 56****.*

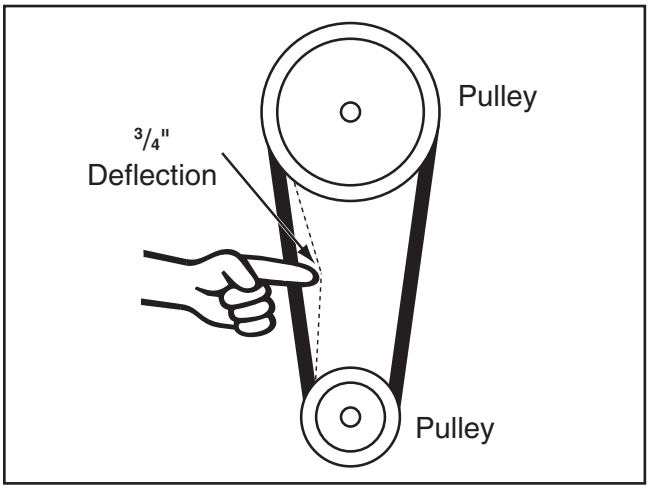


Figure 56. The correct amount of V-belt deflection between the pulleys.

4. When you have properly tensioned the V-belts, re-tighten the motor mounting bolts and re-install the motor access cover.

To replace the V-belts:

1. DISCONNECT JOINTER FROM POWER!

2. Remove the rear access motor cover, then loosen the motor mounting bolts.

3. With assistance, raise the motor assembly up until you can roll the V-belts off the pulleys.

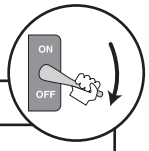
4. Replace the V-belts with a new, matched set, then properly tension them as instructed above.

SECTION 7: SERVICE

Review the troubleshooting and procedures in this section to fix or adjust your machine if a problem develops. If you need replacement parts or you are unsure of your repair skills, then feel free to call our Technical Support at (570) 546-9663.

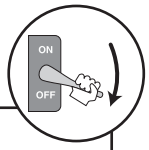
Troubleshooting

Motor & Electrical



Symptom	Possible Cause	Possible Solution
Machine does not start or a breaker trips.	1. Stop push-button engaged/faulty. 2. Power supply switched OFF or at fault. 3. Plug/receptacle at fault/wired wrong. 4. Motor connection wired wrong. 5. Thermal overload relay has tripped. 6. Wall circuit breaker tripped. 7. Contactor not energized/has poor contacts. 8. Wiring open/has high resistance. 9. Motor ON/OFF switch at fault. 10. Brake switch at fault (G9953, G9953ZX & G9953ZXF only). 11. Motor at fault.	1. Rotate button to reset/replace it. 2. Ensure power supply is on/has correct voltage. 3. Test for good contacts; correct the wiring. 4. Correct motor wiring connections (**Page 48**). 5. Reset; adjust trip load dial if necessary; replace. 6. Ensure circuit size is correct/replace weak breaker. 7. Test all legs for power/replace if faulty. 8. Check/fix broken, disconnected, or corroded wires. 9. Replace switch. 10. Inspect/replace switch. 11. Test/repair/replace.
Machine stalls or is underpowered.	1. Feed rate/cutting speed too fast. 2. Workpiece material not suitable for machine. 3. Dust collection ducting problem. 4. V-belt(s) slipping. 5. Motor wired incorrectly. 6. Plug/receptacle at fault. 7. Pulley/sprocket slipping on shaft. 8. Motor bearings at fault. 9. Machine undersized for task. 10. Contactor not energized/has poor contacts. 11. Motor overheated. 12. Motor at fault.	1. Decrease feed rate/cutting speed. 2. Only cut wood/ensure moisture is below 20%. 3. Clear blockages, seal leaks, use smooth wall duct, eliminate bends, close other branches. 4. Tension/replace belt(s); ensure pulleys are aligned (**Page 35**). 5. Wire motor correctly (**Page 48**). 6. Test for good contacts/correct wiring. 7. Replace loose pulley/shaft. 8. Test/repair/replace. 9. Use sharp knives/inserts; reduce feed rate/depth of cut. 10. Test all legs for power/replace if faulty. 11. Clean motor, let cool, and reduce workload. 12. Test/repair/replace.
Machine has vibration or noisy operation.	1. Motor or component loose. 2. Knives/gibs at fault. 3. V-belt(s) worn or loose. 4. Pulley loose. 5. Machine incorrectly mounted. 6. Motor fan rubbing on fan cover. 7. Motor bearings at fault.	1. Inspect/replace damaged bolts/nuts, and re-tighten with thread locking fluid. 2. Resharpen/replace knives; set knife alignment/height correctly. 3. Inspect/replace belts with a new matched set. 4. Realign/replace shaft, pulley, setscrew, and key. 5. Tighten mounting bolts; relocate/shim machine. 6. Fix/replace fan cover; replace loose/damaged fan. 7. Test by rotating shaft; rotational grinding/loose shaft requires bearing replacement.

Operations



Symptom	Possible Cause	Possible Solution
Tables are hard to adjust.	1. Table lock is engaged. 2. Table stop bolts blocking movement.	1. Loosen the table lock. 2. Adjust table stop bolts (**Page 46**).
Excessive snipe or gouge in the workpiece end that is uneven with the rest of the cut.	1. Outfeed table is set too low. 2. Too much downward pressure on workpiece end.	1. Align outfeed table height with cutterhead TDC (**Page 44**). 2. Reduce downward pressure on that end of the workpiece.
Workpiece stops in the middle of the cut.	1. Outfeed table is set too high.	1. Align outfeed table height with cutterhead TDC (**Page 44**).
Chipping or stuttering patterns in workpiece.	1. Knots or conflicting grain direction in stock. 2. Nicked or chipped knife or insert. 3. Feeding workpiece too fast. 4. Depth of cut too much. 5. Poor dust collection, chips not being cleared from workpiece.	1. Inspect workpiece for defects, cut with grain (**Page 26**). 2. Replace/rotate knives/inserts (**Pages 38–39**). 3. Reduce feed rate. 4. Reduce the depth of cut. 5. Check dust collection for proper operation; clear blockages; reconfigure ducting system.
Fuzzy grain left in workpiece.	1. Wood moisture too high. 2. Dull knives or inserts.	1. Stock moisture content should be less than 20%; sticker and let dry if necessary. 2. Replace/rotate knives/inserts (**Pages 38–39**).
Long lines or ridges along the length of workpiece.	1. Nicked or chipped knife or insert. 2. Loose or incorrectly installed insert.	1. Replace/rotate knives/inserts (**Pages 38–39**). 2. Remove/replace insert and install properly (**Page 38**).
Wavy finish or chatter marks.	1. Feed workpiece too fast. 2. Knives set unevenly.	1. Reduce feed rate. 2. Check/adjust all knives for correct installation and height (**Page 39**).
Workpiece surface is concave/ convex after jointing.	1. Board not held with even pressure during cut. 2. Stock has excessive bow or warp. 3. Insufficient number of passes.	1. Maintain even downward pressure on workpiece during operation. 2. Surface plane one face to use against the jointer fence. 3. Increase number of passes until the workpiece face is flat.

Infeed Table Stop Bolt

The infeed table has a stop bolt that can be set to limit the how much the infeed table can be lowered (see **Figure 57**). We recommend that this stop bolt be set for the recommended maximum depth of cut specified for your jointer.

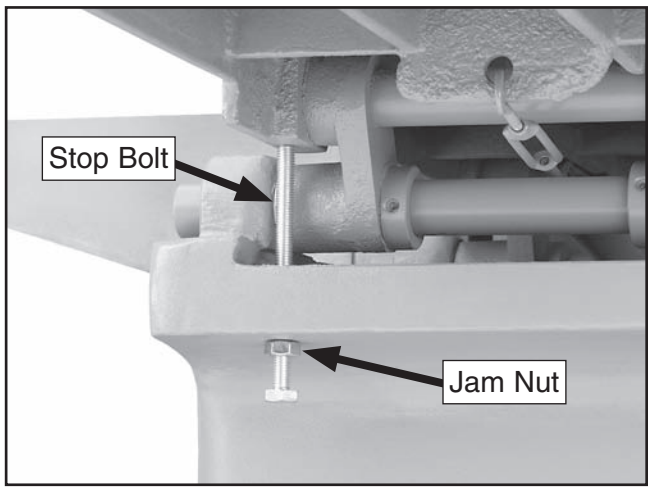


Figure 57. Table stop bolt (viewed from underneath the table).

Rotating/Replacing Cutterhead Inserts

The spiral cutterhead is equipped with indexable carbide inserts that can be rotated to reveal any one of their four cutting edges. If one edge of the insert becomes dull or damaged, simply rotate it 90° to reveal a fresh cutting edge, as shown in **Figure 58**.

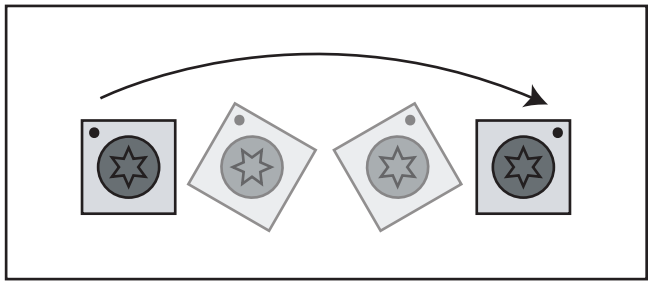


Figure 58. Insert rotating sequence.

Tools Needed	**Qty**
T-Handle Wrench w/T-20 Torx Bit	1
Precision Straightedge	1

To rotate or replace a spiral cutterhead insert:

1. DISCONNECT JOINTER FROM POWER!

2. Put on heavy leather gloves to protect your fingers and hands.

3. Remove any sawdust or debris from the head of the insert, Torx screw, and the surrounding area.

4. Remove the Torx screw and the insert, then clean all dust and debris from both parts and the pocket they were removed from.

   Note: *Proper cleaning of the insert, Torx screw, and the cutterhead pocket is critical to achieving a smooth finish. Dirt or dust trapped between the insert and cutterhead will slightly raise the insert, and make noticeable marks on your workpiece the next time you cut.*

   Tip: *Use low-pressure compressed air or a vacuum nozzle to clean out the cutterhead pocket.*

5. Replace the insert so that a fresh cutting edge faces outward.

   —If all four insert cutting edges have been used, replace it with a new one. Always position the reference dot in the same position when installing a new insert to aid in the rotational sequencing.

6. Lubricate the Torx screw threads with a small amount of light machine oil, wipe the excess off, and torque the screw to 50–55 inch/pounds.

   Note: *If you use the included air pressure torque wrench, refer to the detailed instructions on the next page for its use.*

7. Position the straightedge on the outfeed table and over the insert to make sure that it is installed correctly and at the same height as the other inserts.

   —If the insert is raised above the correct height, remove it and repeat the above procedure until it is properly installed.

Air Pressure Torque Wrench

To fully tighten the Torx screws with the included air pressure torque wrench:

1. Insert a Torx bit into the collet of the wrench.

2. Make sure the pressure gauge is fully threaded onto the wrench, as shown in **Figure 59**.

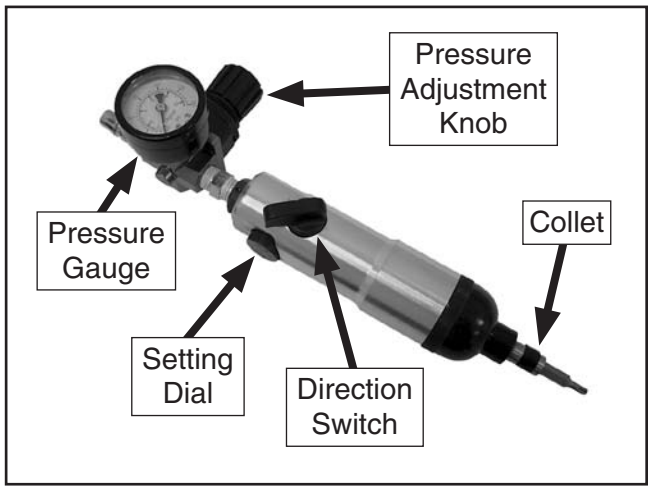


Figure 59. Components of the air pressure torque wrench.

3. Add two drops of pneumatic tool oil to the incoming valve of the wrench to keep the internal components lubricated.

4. Connect the wrench to a source of 90 PSI air pressure, then use the adjustment knob of the pressure gauge to initially set the air pressure to 20 PSI on the gauge.

5. Set the direction switch for clockwise rotation and the setting dial to 2.

6. While carefully holding the insert in position, insert the bit into the Torx screw and press the operation lever to seat the insert. Repeat this step with all remaining inserts.

7`. Adjust the air pressure to 40 PSI, then fully tighten the Torx screw to a final torque setting of approximately 50–55 inch/pounds. Repeat with all remaining inserts.

Adjusting/Replacing Cutterhead Knives

If your jointer has a knife-style cutterhead, correctly setting the height of the knives is crucial to the proper operation of the jointer and is very important in keeping the knives sharp. If one knife is higher than the others, it will do the majority of the work, and thus, dull much faster than the others.

There are several methods for setting the knives. The Jointer Pal® included with your jointer is simple to use and is designed to hold the knives at the correct setting while you secure them. If you choose to use the Jointer Pal®, follow the instructions that are included with it.

The straightedge method is described below and produces the same results as the Jointer Pal®. This method uses a high-quality, precision straightedge held flat against the outfeed table and over the cutterhead, then the knife heights are set to the bottom of the straightedge, as shown in **Figure 60**.

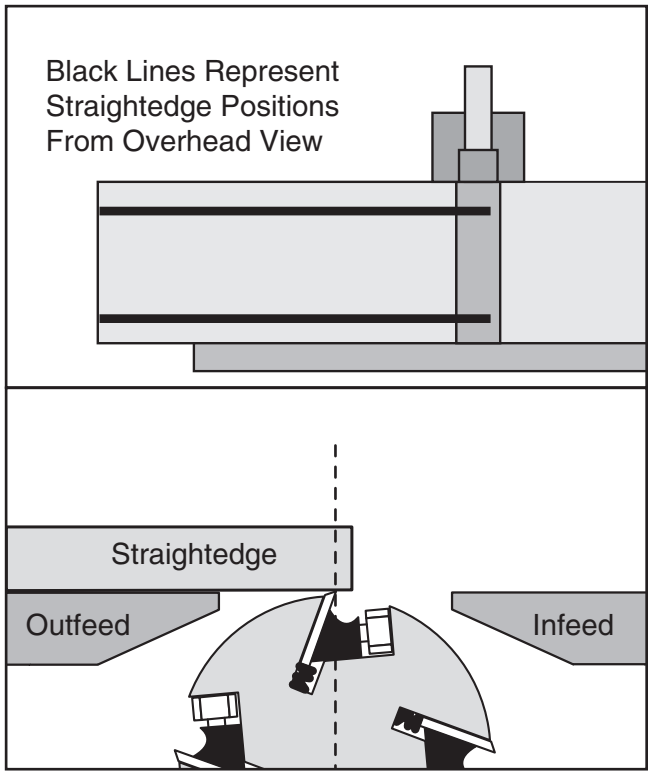


Figure 60. Checking knife height with a straightedge.

Tools Needed	**Qty**
Precision Straightedge	1
Hex Wrench 4mm	1
Wrench 10mm	1

To adjust or replace the knives:

1. DISCONNECT JOINTER FROM POWER!

Note: *Since the height of the knives is set from the outfeed table height, the next step is crucial to correctly adjusting the knives.*

2. Make sure the outfeed table is parallel to the cutterhead body and the table height is correct (refer to **Adjusting Outfeed Table Parallelism** on **Page 44** for detailed instructions).

⚠CAUTION

Cutterhead knives are extremely sharp and can quickly slice your hands or fingers. ALWAYS wear heavy leather gloves when handling these cutters to avoid personal injury.

3. Remove the cutterhead guard, fence assembly, and rear motor access cover to access the cutterhead pulley.

4. Use the cutterhead pulley to rotate the cutterhead and gain access to one of the knives, then lock the cutterhead in place with the cutterhead lock pin (refer to **Page 20** for detailed instructions).

5. Turn the cutterhead gib bolts clockwise, starting in the middle, then alternating back and forth until the gib is loose (see **Figure 61**).

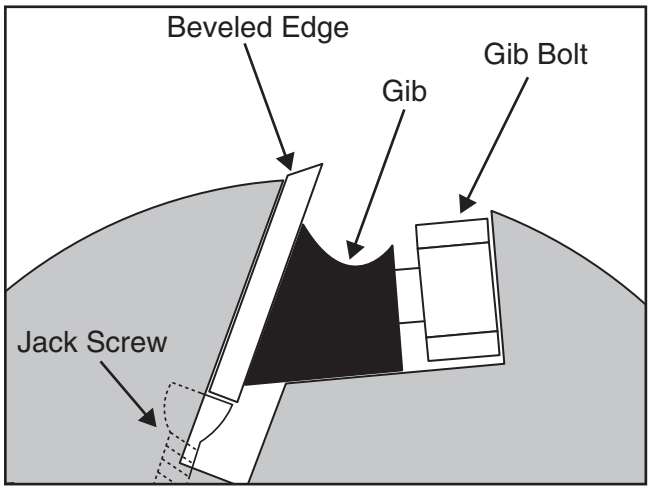


Figure 61. Knife correctly positioned in the cutterhead.

6. Carefully remove the knife and gib.

7. If the knife is dull or damaged, replace it with a new one.

8. Clean the knife, gib, and inside the cutterhead slot to remove all the pitch or sawdust. Coat the knife and gib with a metal protectant (refer to **Page 32**), then fit the gib back into the cutterhead with the knife.

9. Make sure the beveled side of the knife is against the cutterhead, as shown in **Figure 61**.

10. Position the straightedge on the outfeed table and over one end of the knife, then use magnets or an assistant to make sure the straightedge stays in full contact with the outfeed table along its full length.

11. Insert the 3mm hex wrench through the access holes in the cutterhead, then rotate the jack screws to raise or lower the knife (see **Figure 62**). When the knife is set correctly, it will just touch the bottom of the straightedge without lifting it.

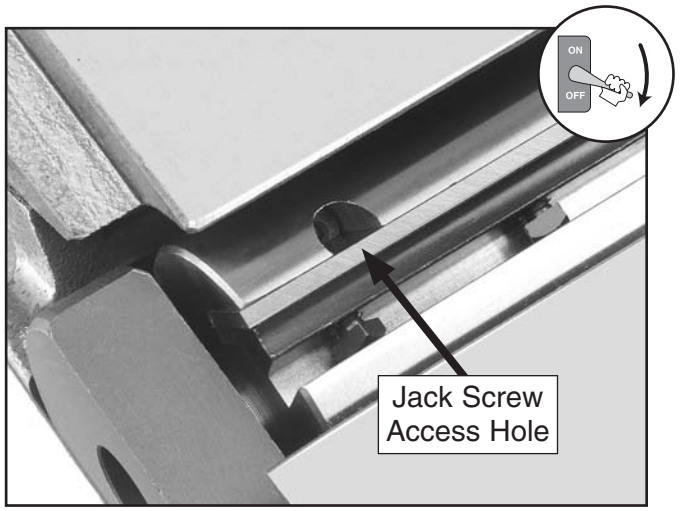


Figure 62. Jack screw access hole.

12. Rotate all of the gib bolts counterclockwise just enough so the gib holds the knife in place.

13. Repeat **Steps 11–12** on the other end of the cutterhead, then repeat **Steps 4–12** with the rest of the knives.

14. Rotate the cutterhead to the first knife you started with.

15. Slightly tighten all the gib bolts, starting in the middle and working your way to the ends by alternating left and right, as illustrated in **Figure 63**. Repeat this step with the rest of the knives.

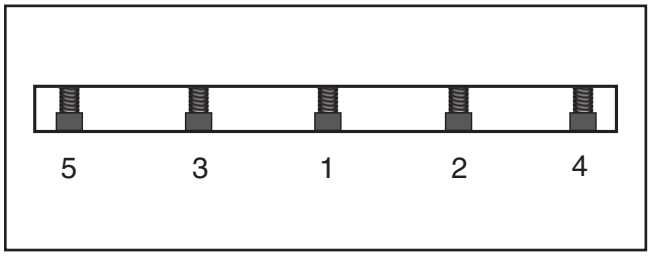


Figure 63. Knife gib bolt tightening sequence.

16. Repeat **Step 15**.

17. Repeat **Step 15** again, but final tighten each gib bolt.

18. Replace the motor access cover, the fence assembly, and the cutterhead guard.

Setting Fence Stops

The fence stops simplify the task of setting the fence to 90° and 45° (135°).

Models G9860 & G9860ZX

Tools Needed	Qty
Machinist's Square	1
Bevel Square	1
Hex Wrench 3mm	1
Wrench 10mm	1

To set the 90° fence stop:

1. DISCONNECT JOINTER FROM POWER!

2. Loosen the fence tilt lock and the jam nut on the 90° stop, then back off the set screw (see **Figure 64**).

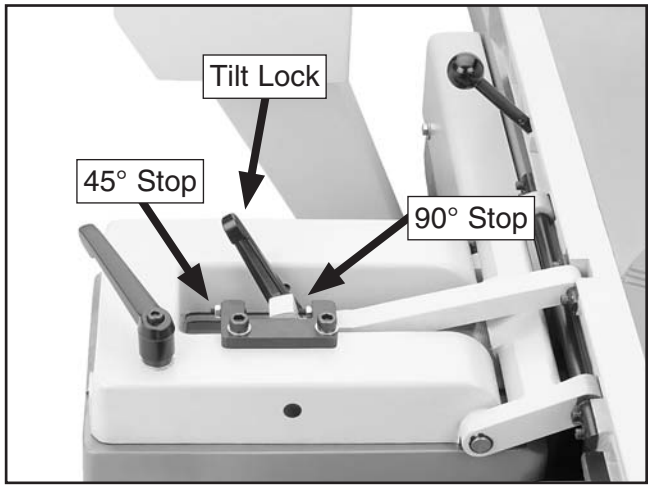


Figure 64. Fence stop controls.

3. Place the machinist's square flat on the outfeed table fairly close to the cutterhead, as shown in **Figure 65**, adjust the fence to the square, then tighten the fence tilt lock to secure the setting.

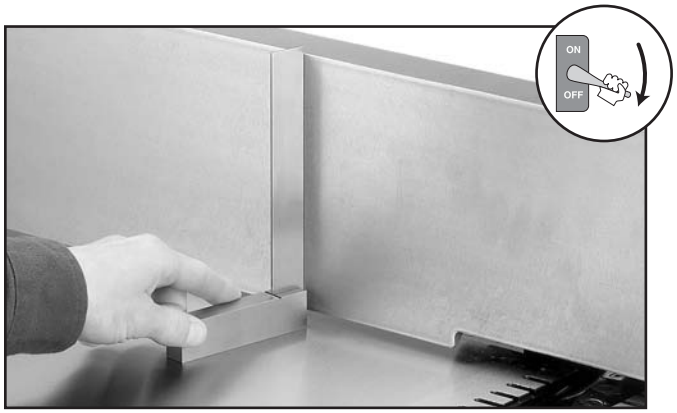


Figure 65. Setting the fence to 90° (cutterhead guard moved away for clarity).

4. Adjust the 90° set screw until it just touches the tilting arm, then re-tighten the jam nut.

To set the 45° fence stop:

1. DISCONNECT JOINTER FROM POWER!

2. Loosen the fence tilt lock and the jam nut on the 45° stop, then back off the set screw (see **Figure 64** on the previous page).

3. Place the bevel square set at 135° flat against the outfeed table close to the cutterhead, as shown in **Figure 66**, adjust the fence to match the angled face of the square, then re-tighten the tilt lock.

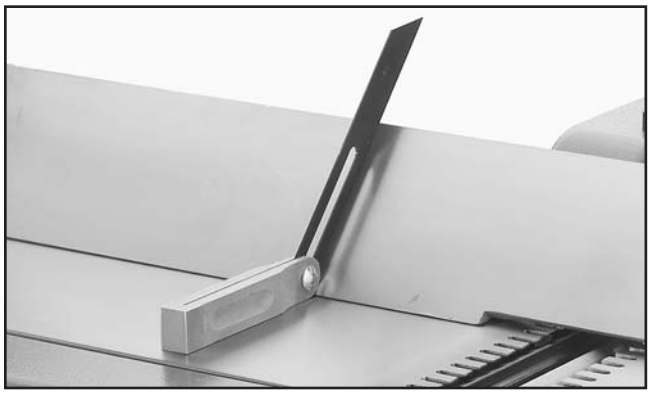


Figure 66. Setting the fence to 45° (135°), with the cutterhead guard removed for clarity.

4. Adjust the 45° set screw until it just touches the tilting arm, then re-tighten the jam nut.

Models G9953, G9953ZX, G9953ZXF

Tools Needed	Qty
Machinist's Square	1
Bevel Square	1
Wrench 10mm	1

To set the 90° fence stop:

1. DISCONNECT JOINTER FROM POWER!

2. Loosen the tilt lock and the 90° stop jam nut, then back off the stop bolt (see **Figure 67**).

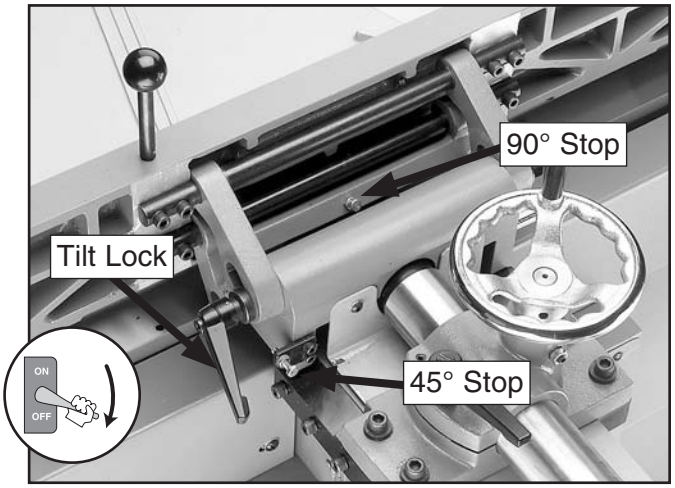


Figure 67. Fence tilting controls.

3. Place the machinist's square flat on the outfeed table fairly close to the cutterhead, as shown in **Figure 65**, adjust the fence to the square, then tighten the fence tilt lock to secure the setting.

4. Tighten the stop bolt toward the fence assembly until it becomes snug, then re-tighten the jam nut.

To set the 45° fence stop:

1. DISCONNECT JOINTER FROM POWER!

2. Loosen the tilt lock and the 45° stop jam nut, then back off the stop bolt (see **Figure 67**).

3. Place the bevel square set at 135° flat against the outfeed table close to the cutterhead, as shown in **Figure 66**, adjust the fence to match the angled face of the square, then re-tighten the tilt lock.

4. Tighten the stop bolt toward the fence assembly until it becomes snug, then re-tighten the jam nut.

Adjusting Table Parallelism

The tables of your jointer MUST be parallel with the cutterhead and each other (see **Figure 68**) to ensure good cutting results and to reduce the risk of workpiece kickback.

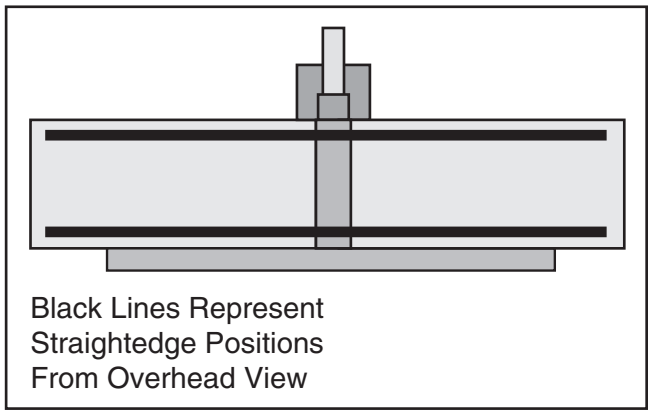


Figure 68. Illustration of table parallelism concept.

Adjusting table parallelism is a task of precision, time, and patience. Fortunately, this is considered a permanent adjustment that should not need to be repeated for the life of the machine.

Due to the complex nature of this task, we recommend that you carefully double-check the current table parallelism to be sure that adjustments need to be made.

Note: *Typically, a tolerance of 0.005" or less in parallelism between the tables is considered acceptable.*

When adjusting table parallelism, you must do the following: 1) Properly adjust the outfeed table height and parallelism in relation to the cutterhead, and 2) adjust the infeed table parallel to the outfeed table.

Note: *If your jointer uses a knife-style cutterhead, you will also have to adjust the knives as the last procedure to bring the outfeed table surface and cutting edges of the knives to the same height.*

Tools Needed	**Qty**
Precision Straightedge 6'L	1
Feeler Gauge 3/64" (1.3mm)	1
Phillips Screwdriver	1
Hex Wrench 4mm	1
Hex Wrench 13mm	1
Wrench or Socket 13mm	1
Wrench or Socket 32mm	1

Adjusting Outfeed Table Parallelism

1. DISCONNECT JOINTER FROM POWER!

⚠CAUTION

Cutterhead knives and inserts are extremely sharp and can quickly slice your hands or fingers. ALWAYS wear heavy leather gloves when handling these cutters to avoid personal injury.

2. **Models G9860 & G9860ZX:** Remove the cutterhead guard, fence assembly, and rear motor access cover to access the cutterhead pulley.

Models G9953, G9953ZX, & G9953ZXF: Remove the cutterhead guard and fence assembly, then open the rear cutterhead cover to access the cutterhead pulley.

Note: *The cutterhead pulley is used in the following steps to rotate the cutterhead.*

3. Lower the outfeed table stop bolt and loosen the table lock so that they do not interfere with adjustments.

4. Make sure the precision straightedge and the table surface are free of debris, then place the straightedge on the back of the outfeed table and across the cutterhead.

Note: *In the following steps, the process of checking the outfeed table for the correct height above the cutterhead is different between knife-style and spiral cutterheads.*

Knife-Style Cutterhead: The correct outfeed table height is 3⁄64" (1.3mm) above the cutterhead BODY, as measured with a feeler gauge (see **Figure 69**). Rotate the cutterhead to make sure the knives do not interfere with proper measurement.

Spiral Cutterhead: The outfeed table is at the correct height above the cutterhead when an insert is at the top-dead-center or at its highest point of rotation just touches the straightedge without lifting it, as shown in **Figure 69**. Rotate the cutterhead pulley to properly position an insert below the straightedge.

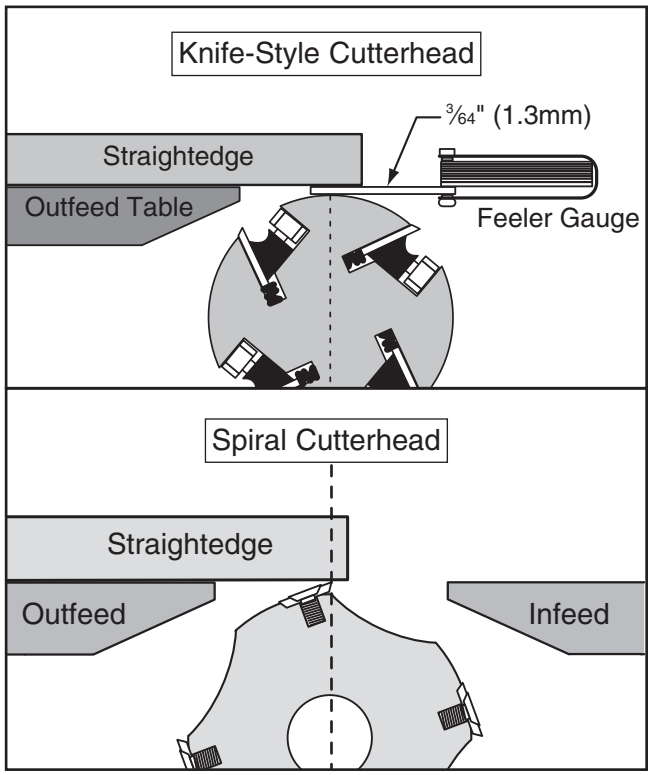


Figure 69. Checking the outfeed table for the correct height above the cutterhead.

5. If the outfeed table surface is not at the right height, use the handwheel to bring the table to the correct height above the cutterhead, then tighten the table lock to secure the setting.

6. To check the outfeed table parallelism with the cutterhead body, place the straightedge on the front of the table and measure the height above the cutterhead, as instructed in **Step 4**.

—If the measurements of the front and back of the table are within 0.002" or less of each other, no further adjustments to the outfeed table are required. Proceed to **Step 12**.

—If the front table measurement is NOT correct and within the tolerance of the back measurement, continue to **Step 7**.

7. Remove the front table cover to expose the table adjustment bolts, as shown in **Figure 70**.

Note: *For Models G9953, G9953ZX, and G9953ZXF, you will need to remove the brake handle and hub before removing the cover.*

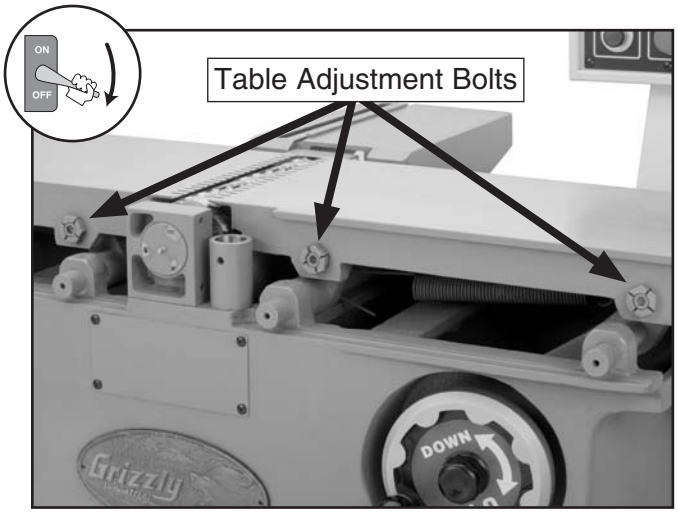


Figure 70. Front table cover removed to expose the table adjustment bolts.

8. Loosen the cap screw in the center of the outfeed table adjustment bolt three full turns, then loosen the set screw that is directly underneath the adjustment bolt (see **Figure 71**).

   Note: *Both of these screws are used to lock the adjustment bolt in place.*

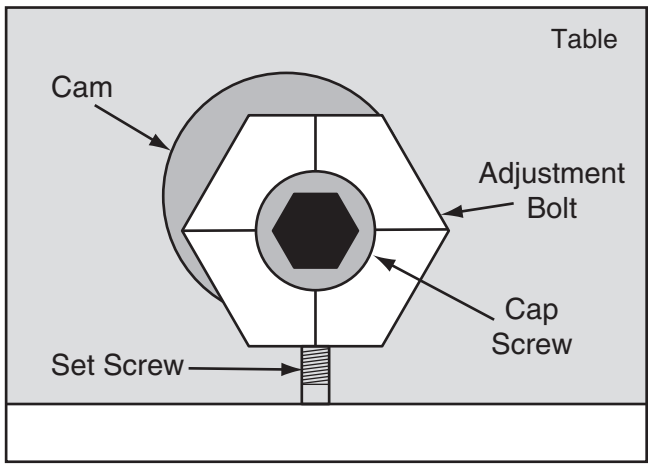


Figure 71. Illustration of the table adjustment bolt components.

   Note: *The goal of the next step is to bring the outfeed table parallel to the cutterhead body from front-to-back by raising or lowering the front corner of the outfeed table.*

9. The adjustment bolt shaft is cam-shaped, as shown in **Figure 71**, and connects the table to the lifting arm. Rotate the adjustment bolt in very small increments to raise or lower the front corner of the outfeed table until the surface is the correct height above the cutterhead, as instructed in **Step 4**.

10. Re-check the table height at the back edge of the table, as instructed in **Step 4**.

   —If the table height is correct from front-to-back, no further adjustments are necessary. Go to **Step 11** to finish this procedure.

   —If the table height from front-to-back is not correct and the same, loosen the table lock and use the handwheel to bring the back of the table to the correct height above the cutterhead body, then repeat **Step 9**. Continue this process until the table height is correct and the same from front-to-back.

11. When the outfeed table height is correct and parallel to the cutterhead, re-tighten the adjustment bolt cap screw and set screw (see **Figure 71**), then make sure the table lock is tightened.

12. Loosen the jam nut and adjust the outfeed stop bolt underneath the table so that it just touches the bottom of the tables, as shown in **Figure 72**, then re-tighten the jam nut.

   Note: *When adjusted to the correct outfeed table height, use the stop bolt for a convenient method of ensuring the outfeed table is set at the proper height.*

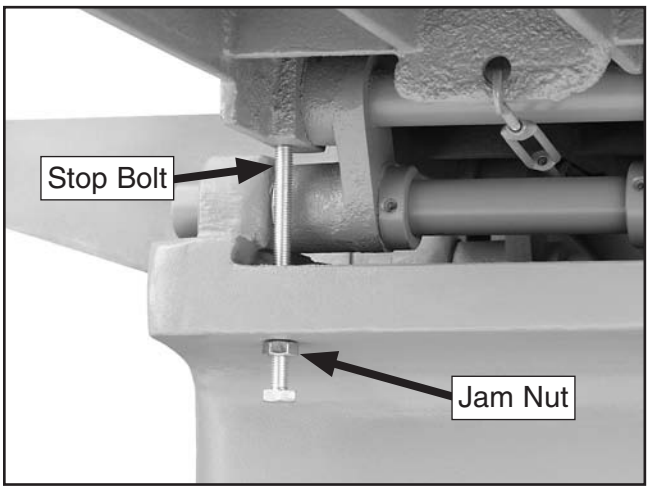


Figure 72. Outfeed table stop bolt (viewed from underneath the table).

13. When the **Adjusting Outfeed Table Parallelism** procedure is successfully completed, proceed to **Adjusting Infeed Table Parallelism**.

Adjusting Infeed Table Parallelism

1. Make sure that all steps in the **Adjusting Outfeed Table Parallelism** procedure have been successfully completed and that the jointer is still disconnected from power.

2. Make sure the table surfaces and the precision straightedge are free from any debris that would interfere with taking measurements, then place the straightedge equally over the back of the outfeed and infeed tables.

   Note: *Make sure the straightedge is not in contact with a knife or insert.*

3. With the use of a magnet or an assistant, make sure that the straightedge stays flat against the full length of its contact with the outfeed table during the following steps.

4. Use the handwheel to adjust the infeed table as close as possible to the straightedge, then look closely for any gaps between the infeed table and the straightedge. Repeat this process on the front of the infeed table.

   —If there are no gaps as the straightedge is positioned on both the back and front of the tables, then the infeed table is parallel with the outfeed table and the cutterhead—thus, no further adjustments are required. Proceed to **Step 7**.

   —If there are gaps between the straightedge and the infeed table, make a note of how much and where the gaps are, then proceed to **Step 5**.

   Note: *To access the table adjustment bolts on the back side of the infeed table, remove the back table cover.*

5. Use the same process you performed in **Step 9** on **Page 46** to raise or lower the left or right end of the infeed table to eliminate the gaps. Adjust the adjustment bolts equally on each side for the targeted end of the table, one after the other, in very small increments (see **Figure 73**).

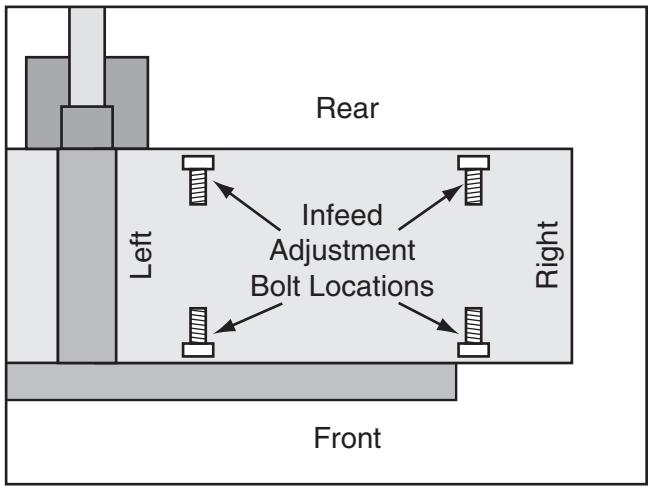


Figure 73. Locations of the infeed table adjustment bolts.

6. Repeat **Steps 4–5** until the infeed table is completely parallel to the outfeed table, which will also make it parallel to the cutterhead.

7. If the table adjustment cap and set screws are loose, re-tighten them and re-install the previously removed parts.

8. Loosen the screw that secures the depth of cut pointer (see **Figure 74**), adjust the pointer to "0", then re-tighten the screw.

Figure 74. Depth of cut scale and pointer.

9. If your jointer uses a knife-style cutterhead, re-adjust the knife heights as instructed in the **Adjusting/Replacing Cutterhead Knives** subsection on **Page 39**.

SECTION 8: WIRING

These pages are current at the time of printing. However, in the spirit of improvement, we may make changes to the electrical systems of future machines. Compare the manufacture date of your machine to the one stated in this manual, and study this section carefully.

If there are differences between your machine and what is shown in this section, call Technical Support at (570) 546-9663 for assistance BEFORE making any changes to the wiring on your machine. An updated wiring diagram may be available. **Note:** *Please gather the serial number and manufacture date of your machine before calling. This information can be found on the main machine label.*

⚠WARNING
Wiring Safety Instructions

SHOCK HAZARD. Working on wiring that is connected to a power source is extremely dangerous. Touching electrified parts will result in personal injury including but not limited to severe burns, electrocution, or death. Disconnect the power from the machine before servicing electrical components!

MODIFICATIONS. Modifying the wiring beyond what is shown in the diagram may lead to unpredictable results, including serious injury or fire. This includes the installation of unapproved aftermarket parts.

WIRE CONNECTIONS. All connections must be tight to prevent wires from loosening during machine operation. Double-check all wires disconnected or connected during any wiring task to ensure tight connections.

CIRCUIT REQUIREMENTS. You MUST follow the requirements at the beginning of this manual when connecting your machine to a power source.

WIRE/COMPONENT DAMAGE. Damaged wires or components increase the risk of serious personal injury, fire, or machine damage. If you notice that any wires or components are damaged while performing a wiring task, replace those wires or components.

MOTOR WIRING. The motor wiring shown in these diagrams is current at the time of printing but may not match your machine. If you find this to be the case, use the wiring diagram inside the motor junction box.

CAPACITORS/INVERTERS. Some capacitors and power inverters store an electrical charge for up to 10 minutes after being disconnected from the power source. To reduce the risk of being shocked, wait at least this long before working on capacitors.

EXPERIENCING DIFFICULTIES. If you are experiencing difficulties understanding the information included in this section, contact our Technical Support at (570) 546-9663.

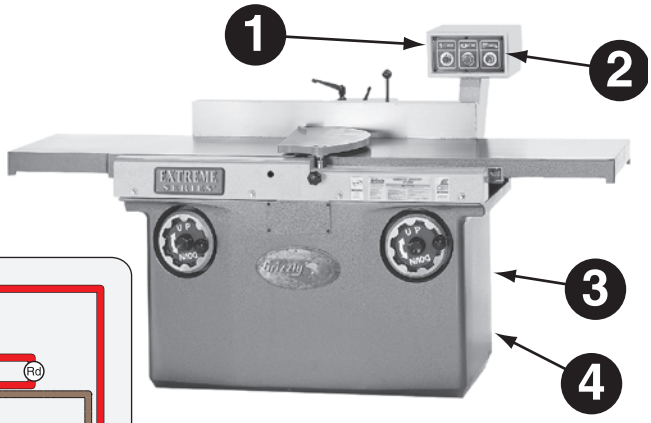
NOTICE

The photos and diagrams included in this section are best viewed in color. You can view these pages in color at www.grizzly.com.

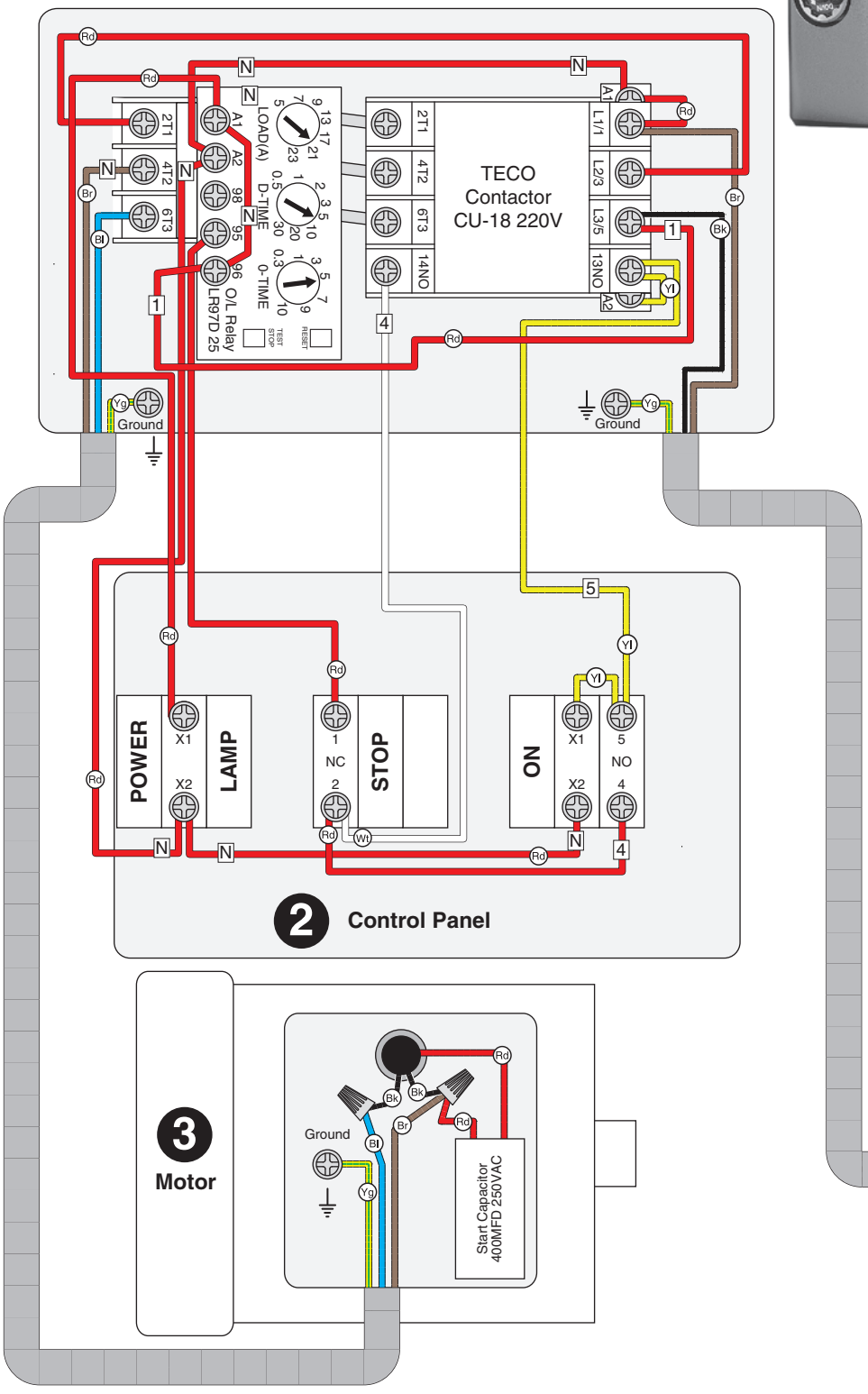
COLOR KEY

BLACK	Bk	BLUE	Bl	YELLOW	Yl	LIGHT BLUE	Lb
WHITE	Wt	BROWN	Br	YELLOW GREEN	Yg	BLUE WHITE	Bw
GREEN	Gn	GRAY	Gy	PURPLE	Pu	TURQUOISE	Tu
RED	Rd	ORANGE	Or	PINK	Pk		

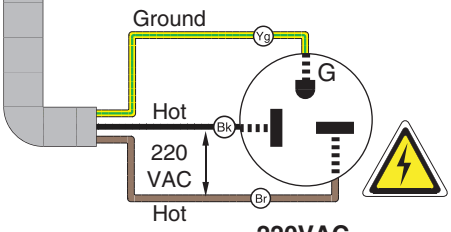
G9860 & G9860ZX Wiring Diagram



1 Electrical Pedestal



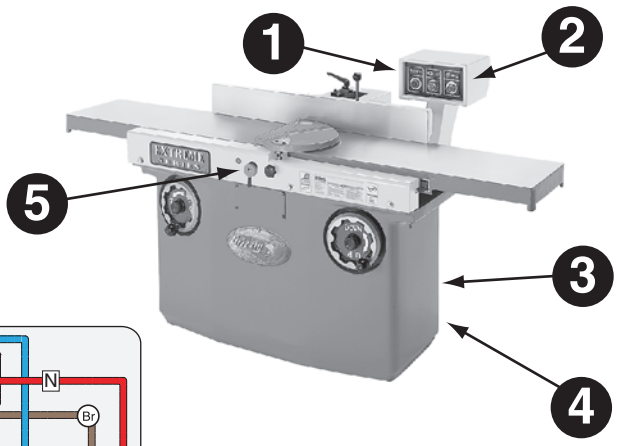
2 Control Panel



4 220VAC
NEMA 6-20 Plug
(As Recommended)

READ ELECTRICAL SAFETY ON PAGE 48!

G9953 & G9953ZX Wiring Diagram



1 Electrical Pedestal

TECO
Contactor
CU-27 220V

TECO
O/L Relay
RHU-80A2

Ground

Ground

POWER
LAMP
STOP
ON

2 Control Panel

NC
NO
COM

5 Cutterhead
Brake Switch

3 Motor

Run Capacitor
30MFD 350VAC

Start Capacitor
800MFD 250VAC

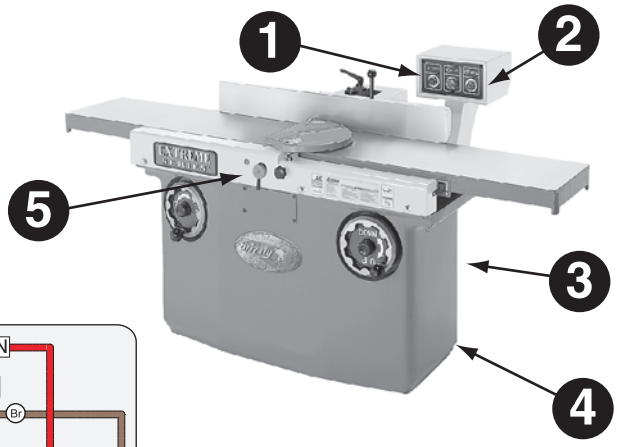
Ground

Hot
Hot
Ground

4 NEMA L6-30
L6-30 PLUG
(as recommended)

READ ELECTRICAL SAFETY ON PAGE 48!

G9953ZXF 220V Wiring Diagram



1 Electrical Pedestal

TECO
Contactor
CU-18 220V

TECO
O/L Relay
RHU-10

Ground

2 Control Panel

POWER
LAMP
STOP
ON

5 Cutterhead
Brake Switch

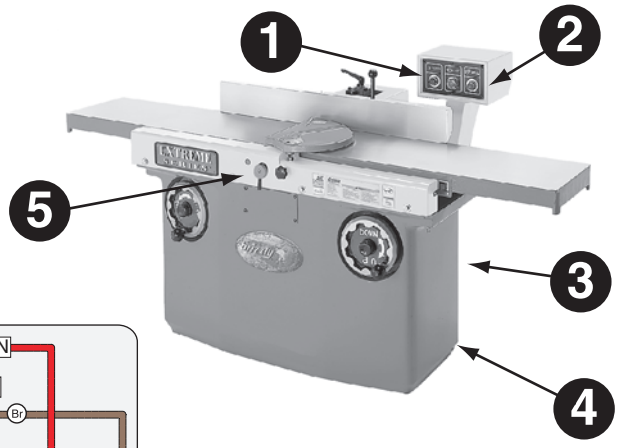
NC
NO
COM

3 Motor

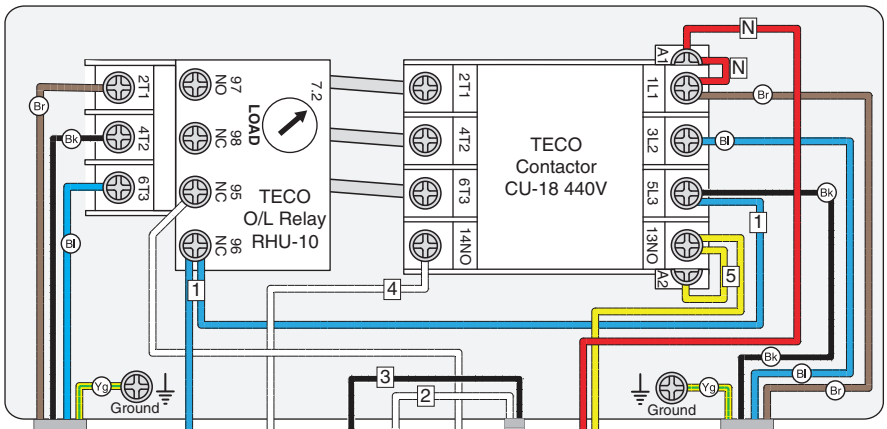
4 220VAC 3-Phase
Locking Disconnect Switch
(As Recommended)

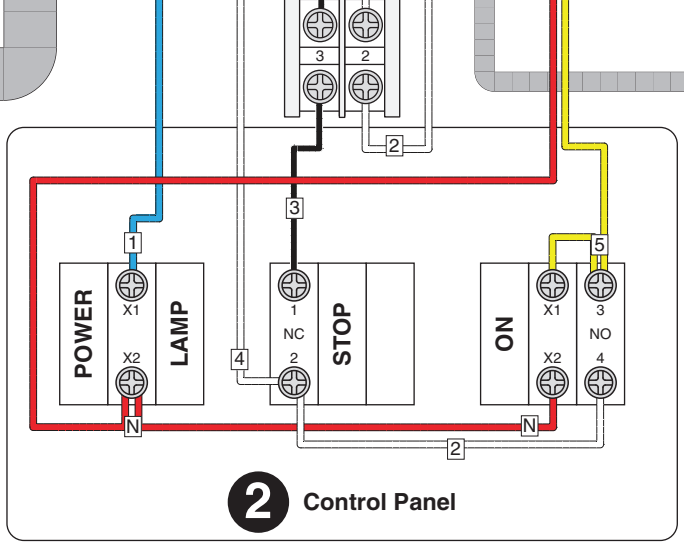
READ ELECTRICAL SAFETY ON PAGE 48!

G9953ZXF 440V Wiring Diagram

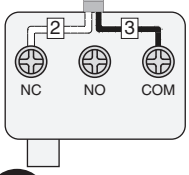


1 Electrical Pedestal



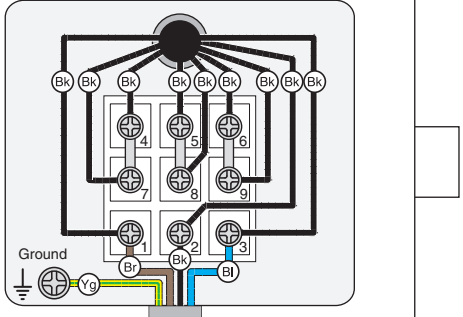


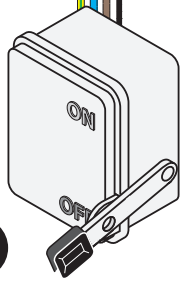
2 Control Panel



5 Cutterhead Brake Switch

3 Motor



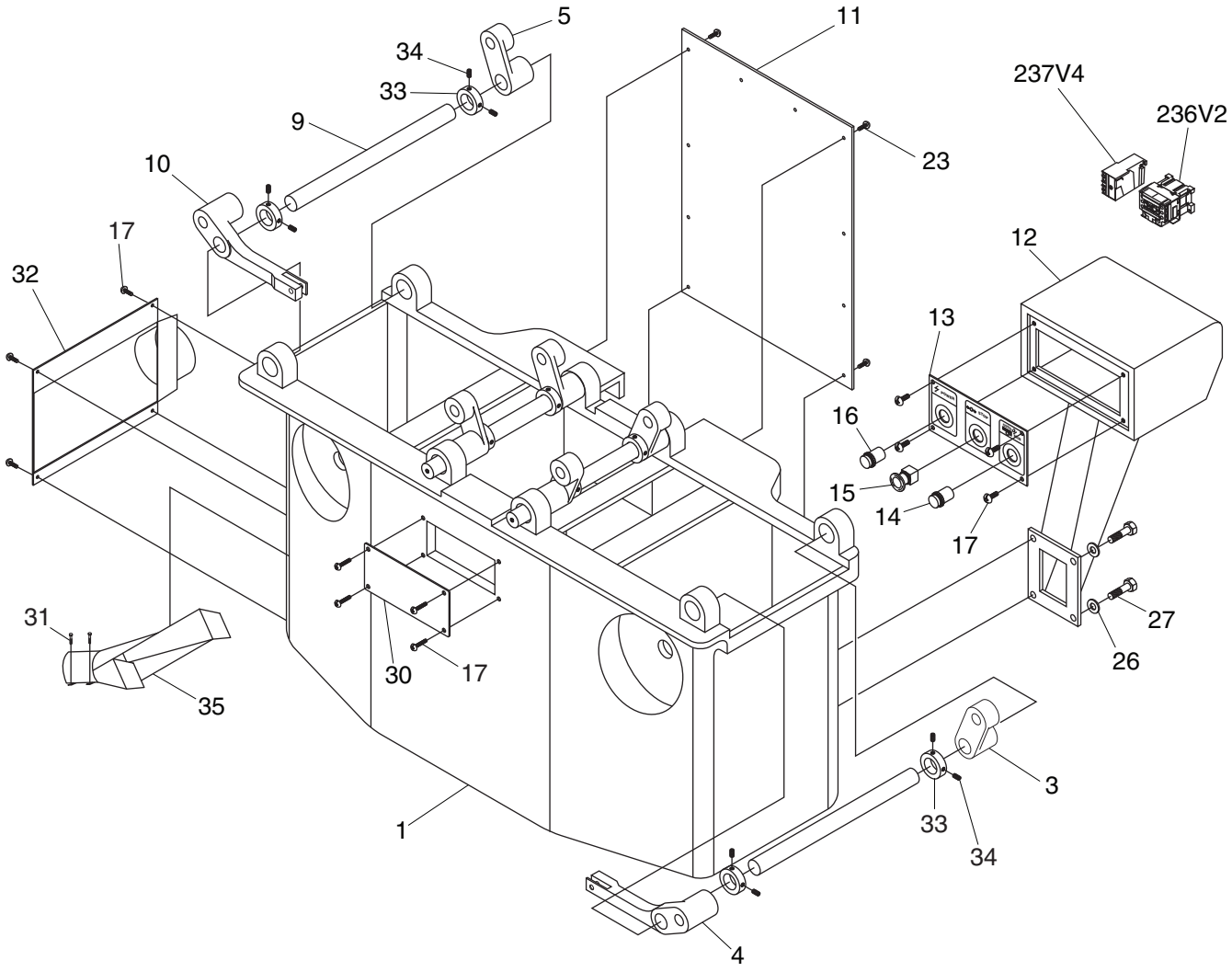


4 440VAC 3-Phase Locking Disconnect Switch (As Recommended)

STOP *READ ELECTRICAL SAFETY ON PAGE 48!*

SECTION 9: PARTS

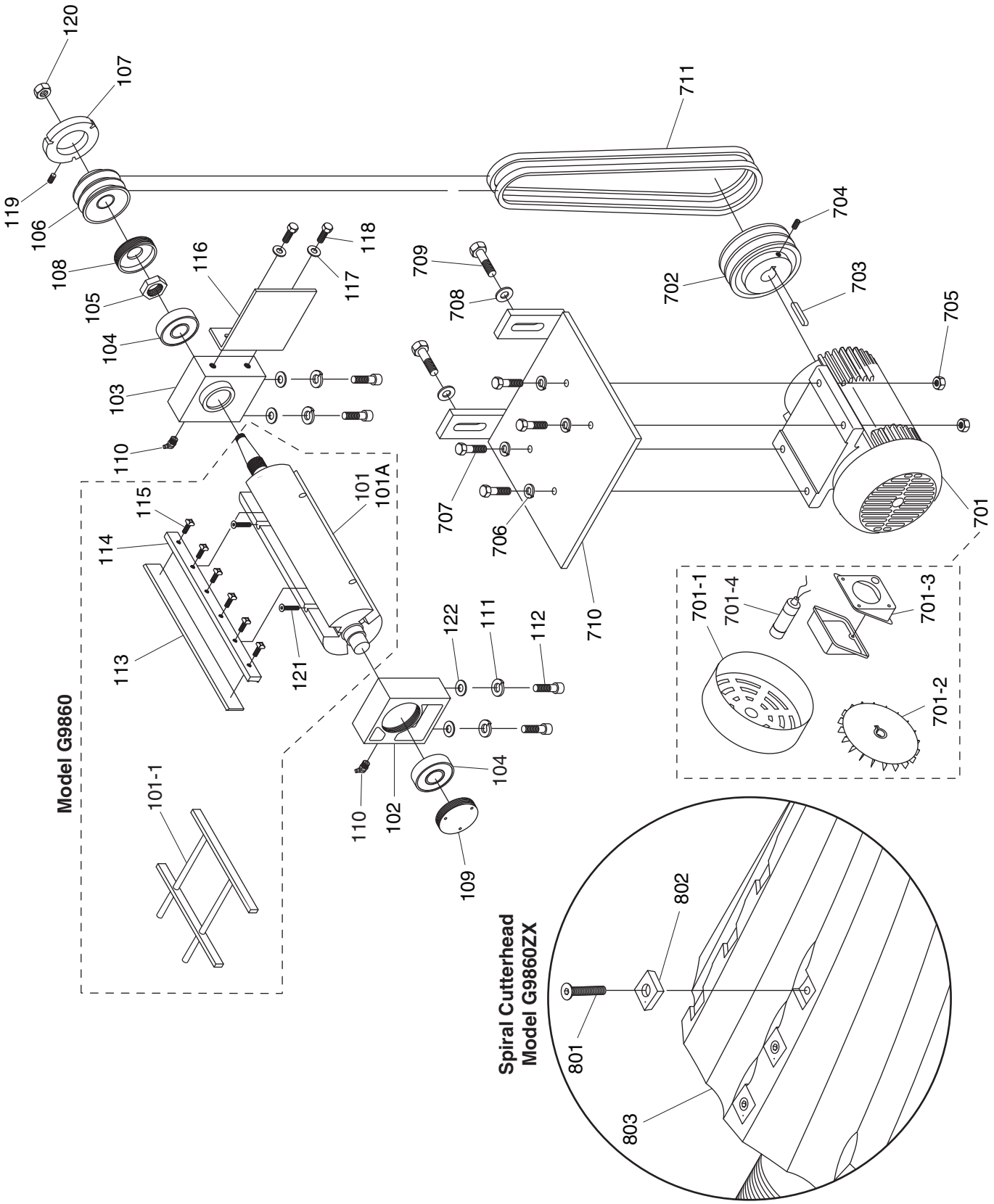
G9860/G9860ZX Cabinet Breakdown & Parts List



REF	PART #	DESCRIPTION
1	P9860001	BASE
3	P9860003	INFEED TABLE SUPPORT
4	P9860004	INFEED TABLE LIFTING ARM
5	P9860005	OUTFEED TABLE SUPPORT
9	P9860009	TABLE HEIGHT SPINDLE
10	P9860010	OUTFEED TABLE LIFTING ARM
11	P9860011	MOTOR ACCESS COVER
12	P9860012	CONTROL PANEL PEDESTAL
13	P9860013	CONTROL PANEL
14	P9860014	ON BUTTON
15	P9860015	STOP BUTTON
16	P9860016	POWER LAMP

REF	PART #	DESCRIPTION
17	PS68M	PHLP HD SCR M6-1 X 10
23	PS68M	PHLP HD SCR M6-1 X 10
26	PW04M	FLAT WASHER 10MM
27	PSB64M	CAP SCREW M10-1.5 X 25
30	P9860031	FRONT CABINET ACCESS COVER
31	PB02M	HEX BOLT M6-1 X 12
32	P9860032	DUST PORT 4"
33	P9860033	LOCK COLLAR
34	PSS20M	SET SCREW M8-1.25 X 8
35	P9860035	DUST CHUTE
236V2	P9860236V2	CONTACTOR TECO CU-18 220V V2.05.08
237V4	P9860237V4	OL RELAY TE LR97D25M7 5-25A V4.09.11

G9860/G9860ZX Cutterhead & Motor Breakdown



G9860 Cutterhead & Motor Parts List

REF	PART #	DESCRIPTION
101-1	H2404	JOINTER PAL CARBIDE JIG
101	P9860101	CUTTERHEAD 3 KNIVE V1.08.02
101A	P9860101A	CUTTERHEAD 4 KNIFE V2.03.05
102	P9860102	FRONT BEARING HOUSING
103	P9860103	REAR BEARING HOUSING
104	P9860104	BALL BEARING 6305VV
105	P9860105	SPANNER NUT M21-1.5
106	P9860106	CUTTERHEAD PULLEY
107	P9860107	CUTTERHEAD STOP PLATE
108	P9860108	REAR BEARING CAP
109	P9860109	FRONT BEARING CAP
110	P9860110	GREASE FITTING
111	PLW06M	LOCK WASHER 10MM
112	PSB70M	CAP SCREW M10-1.5 X 45
113	P9860113	KNIFE 1-3/16" X 12" X 1/8"
114	P9860114	KNIFE GIB 12"
115	P9860121	GIB BOLT M8-1.25 X 10
116	P9860116	BRACKET
117	PW04M	FLAT WASHER 10MM
118	PB70M	HEX BOLT M10-1.5 X 16

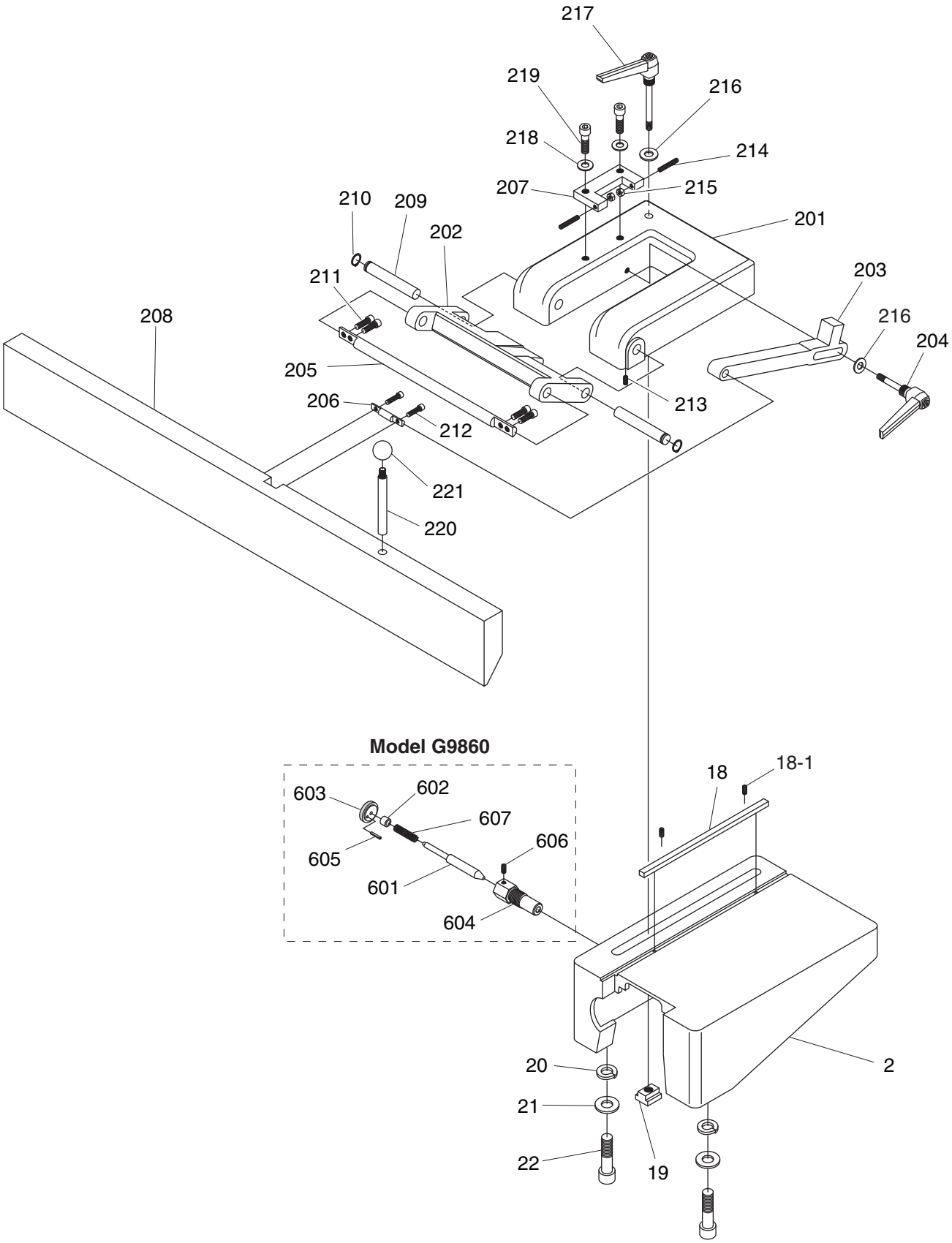
REF	PART #	DESCRIPTION
119	PSS09M	SET SCREW M8-1.25 X 20
120	P9860118	SPECIAL HEX NUT M17-1.5
121	P9860121	JACK SCREW M6-1 X 16
122	PW04M	FLAT WASHER 10MM
701	P9860701	MOTOR 3HP 220V 1PH
701-1	P9860701-1	MOTOR FAN COVER
701-2	P9860701-2	MOTOR FAN
701-3	P9860701-3	MOTOR WIRING JUNCTION BOX
701-4	P9860701-4	S CAP. 400M 250V 1-3/4 X 3-1/2
702	P9860702	MOTOR PULLEY
703	PK109M	KEY 7 X 7 X 35
704	PSS08	SET SCREW 5/16-18 X 1/2
705	PN02M	HEX NUT M10-1.5
706	PLW06M	LOCK WASHER 10MM
707	PB31M	HEX BOLT M10-1.5 X 40
708	PW01	FLAT WASHER 1/2
709	PB35M	HEX BOLT M12-1.75 X 40
710	P9860710	MOTOR MOUNT PLATE
711V2	PVA47	V-BELT A47

G9860ZX Cutterhead & Motor Parts List

REF	PART #	DESCRIPTION
102	P9860102	FRONT BEARING HOUSING
103	P9860103	REAR BEARING HOUSING
104	P9860104	BALL BEARING 6305VV
105	P9860105	SPANNER NUT M21-1.5
106	P9860106	CUTTERHEAD PULLEY
107	P9860107	CUTTERHEAD STOP PLATE
108	P9860108	REAR BEARING CAP
109	P9860109	FRONT BEARING CAP
110	P9860110	GREASE FITTING
111	PLW06M	LOCK WASHER 10MM
112	PSB70M	CAP SCREW M10-1.5 X 45
116	P9860116	BRACKET
117	PW04M	FLAT WASHER 10MM
118	PB70M	HEX BOLT M10-1.5 X 16
119	PSS09M	SET SCREW M8-1.25 X 20
120	P9860118	SPECIAL HEX NUT M17-1.5
122	PW04M	FLAT WASHER 10MM
701	P9860701	MOTOR 3HP 220V 1PH

REF	PART #	DESCRIPTION
701-1	P9860701-1	MOTOR FAN COVER
701-2	P9860701-2	MOTOR FAN
701-3	P9860701-3	MOTOR WIRING JUNCTION BOX
701-4	P9860ZX701-4	S CAP. 400M 250V 1-3/4 X 3-1/2
702	P9860702	MOTOR PULLEY
703	PK109M	KEY 7 X 7 X 35
704	PSS08	SET SCREW 5/16-18 X 1/2
705	PN02M	HEX NUT M10-1.5
706	PLW06M	LOCK WASHER 10MM
707	PB31M	HEX BOLT M10-1.5 X 40
708	PW01	FLAT WASHER 1/2
709	PB35M	HEX BOLT M12-1.75 X 40
710	P9860710	MOTOR MOUNT PLATE
711V2	PVA47	V-BELT A47
801	PFH35M	FLAT HD TORX T20 M6-1 X 15
802	P9860ZX802	INDEXABLE INSERT 14 X 14 X 2MM
803	P9860ZX803	SPIRAL CUTTERHEAD 12"

G9860/G9860ZX Fence Breakdown



G9860 Fence Parts List

REF	PART #	DESCRIPTION
2	P9860002	FENCE SEAT
18	P9860018	KEY 10 X 8 X 300
18-1	PRP49M	ROLL PIN 5 X 25
19	P9860019	FENCE LOCK T-NUT
20	PLW10M	LOCK WASHER 16MM
21	PW08M	FLAT WASHER 16MM
22	PSB77M	CAP SCREW M12-1.75 X 30
201	P9860201	FENCE BASE
202	P9860202	PIVOT BRACKET
203	P9860203	CONNECTOR BRACKET
204	P9860204	TILT LOCK LEVER ASSY
205	P9860205	LOWER FENCE ROD
206	P9860206	CLAMP ROD
207	P9860207	STOP BRACKET
208	P9860208	FENCE
209	P9860209	UPPER FENCE ROD
210	PR06M	EXT RETAINING RING 16MM
211	PSB15M	CAP SCREW M5-.8 X 20

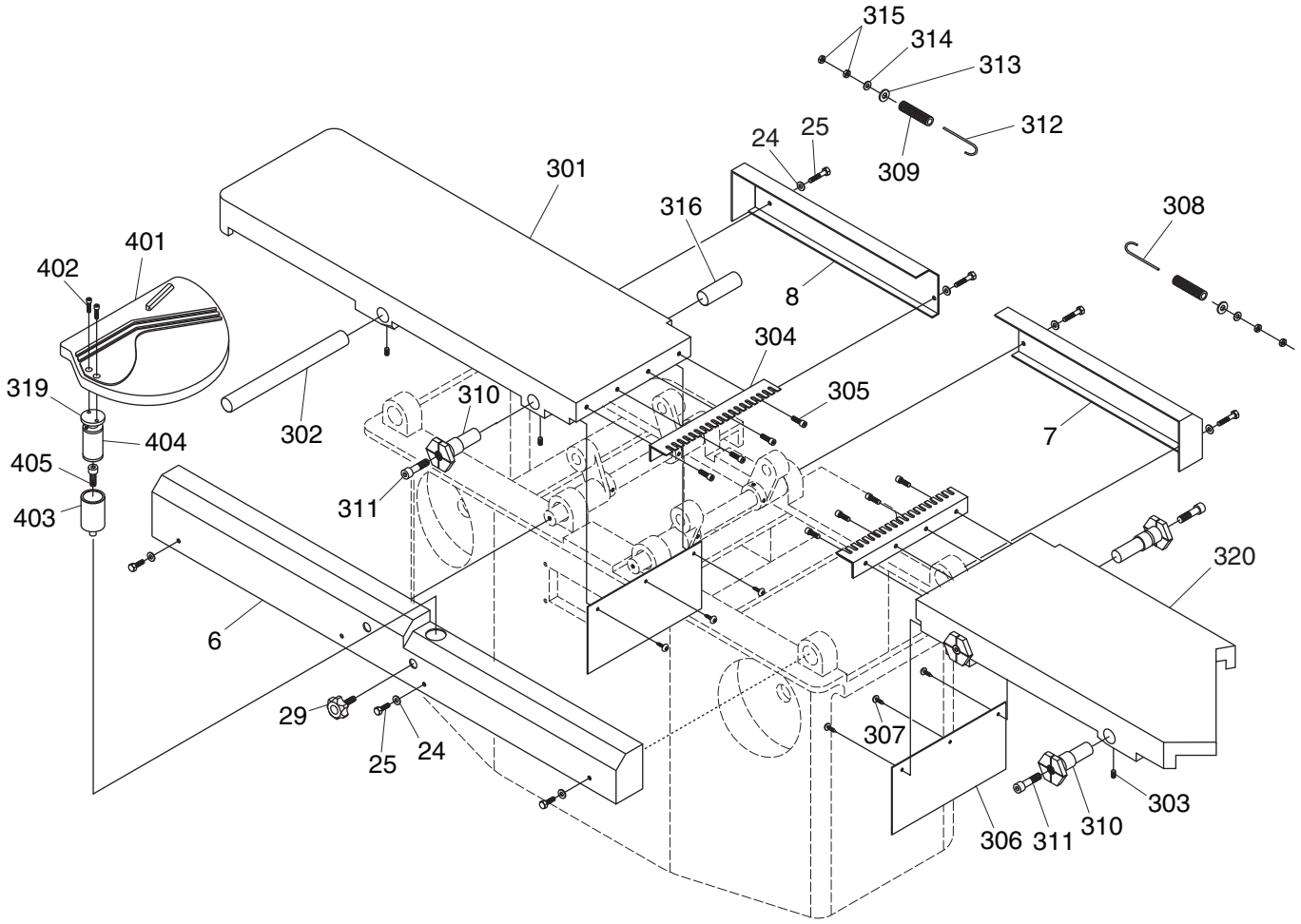
REF	PART #	DESCRIPTION
212	PSB16M	CAP SCREW M4-.7 X 16
213	PSS04M	SET SCREW M6-1 X 12
214	PSS29M	SET SCREW M6-1 X 35
215	PN01M	HEX NUT M6-1
216	PW01	FLAT WASHER 1/2
217	P9860217	FENCE LOCK LEVER ASSY
218	PW04M	FLAT WASHER 10MM
219	PSB64M	CAP SCREW M10-1.5 X 25
220	P9860220	FENCE ADJUSTMENT HANDLE
221	P9860221	KNOB 3/8"-16
601	P9860601	ROD
602	P9860602	COLLAR
603	P9860603	KNURLED KNOB
604	P9860604	BRAKE CASING
605	PRP64M	ROLL PIN 3 X 18
606	PSS02M	SET SCREW M6-1 X 6
607	P9860607	COMPRESSION SPRING

G9860ZX Fence Parts List

REF	PART #	DESCRIPTION
2	P9860002	FENCE SEAT
18	P9860018	KEY 10 X 8 X 300
18-1	PRP49M	ROLL PIN 5 X 25
19	P9860019	FENCE LOCK T-NUT
20	PLW10M	LOCK WASHER 16MM
21	PW08M	FLAT WASHER 16MM
22	PSB77M	CAP SCREW M12-1.75 X 30
201	P9860201	FENCE BASE
202	P9860202	PIVOT BRACKET
203	P9860203	CONNECTOR BRACKET
204	P9860204	TILT LOCK LEVER ASSY
205	P9860205	LOWER FENCE ROD
206	P9860206	CLAMP ROD
207	P9860207	STOP BRACKET

REF	PART #	DESCRIPTION
208	P9860208	FENCE
209	P9860209	UPPER FENCE ROD
210	PR06M	EXT RETAINING RING 16MM
211	PSB15M	CAP SCREW M5-.8 X 20
212	PSB16M	CAP SCREW M4-.7 X 16
213	PSS04M	SET SCREW M6-1 X 12
214	PSS29M	SET SCREW M6-1 X 35
215	PN01M	HEX NUT M6-1
216	PW01	FLAT WASHER 1/2
217	P9860217	FENCE LOCK LEVER ASSY
218	PW04M	FLAT WASHER 10MM
219	PSB64M	CAP SCREW M10-1.5 X 25
220	P9860220	FENCE ADJUSTMENT HANDLE
221	P9860221	KNOB 3/8"-16

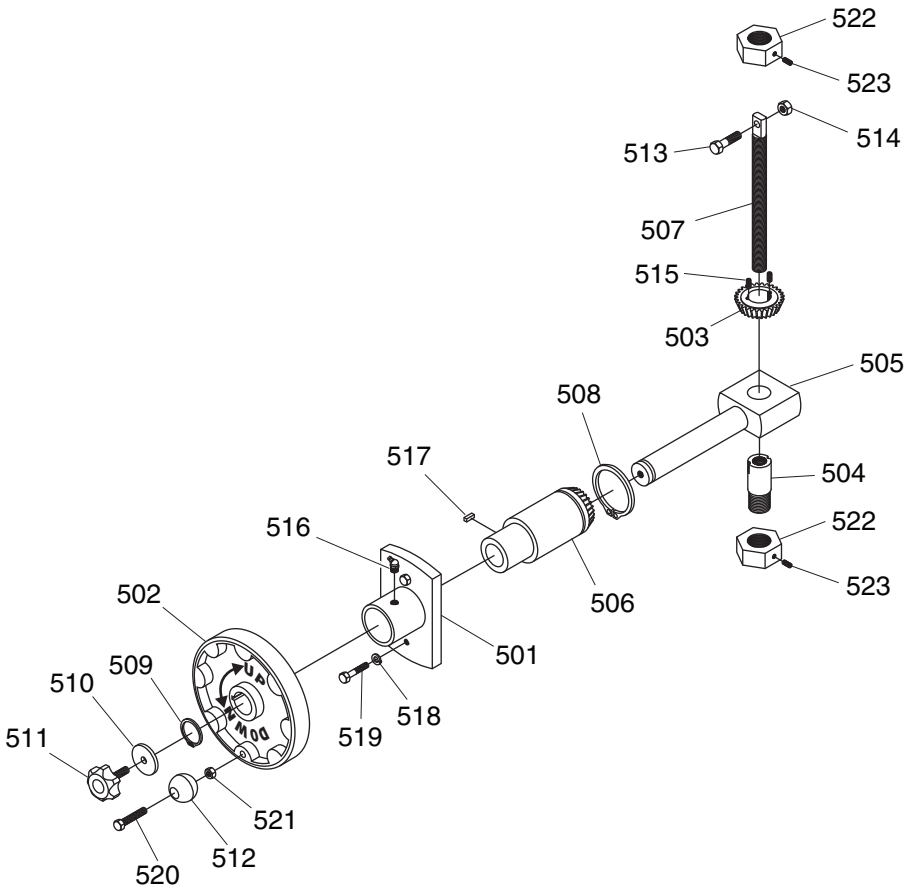
G9860/G9860ZX Table Breakdown & Parts List



REF	PART #	DESCRIPTION
6	P9860006	FRONT TABLE COVER
7	P9860007	INFEED TABLE REAR COVER
8	P9860008	OUTFEED TABLE REAR COVER
24	PW01M	FLAT WASHER 8MM
25	PB03M	HEX BOLT M8-1.25 X 16
29	P9860029	KNOB M10-1.5 X 30
301	P9860301	OUTFEED TABLE
302	P9860302	TABLE PIVOT ROD LONG
303	PSS16M	SET SCREW M8-1.25 X 10
304	P9860304	NOISE DAMPER
305	PSB26M	CAP SCREW M6-1 X 12
306	P9860306	COVER
307	PS14M	PHLP HD SCR M6-1 X 12
308	P9860308	J-ROD LONG
309	P9860309	TENSION SPRING

REF	PART #	DESCRIPTION
310	P9860310	BED PIVOT PIN
311	PSB70M	CAP SCREW M10-1.5 X 45
312	P9860312	J-ROD SHORT
313	PW01	FLAT WASHER 1/2
314	PW02	FLAT WASHER 3/8
315	PN09M	HEX NUT M12-1.75
316	P9860316	TABLE PIVOT ROD SHORT
319	P9860319	SPRING SHAFT COVER
320	P9860320	INFEED TABLE
401	P9860401	CUTTERHEAD GUARD
402	PSB31M	CAP SCREW M8-1.25 X 25
403	P9860403	SPRING SHAFT HOUSING
404	P9860404	SPRING SHAFT
405	PSB129M	CAP SCREW M12-1.75 X 20

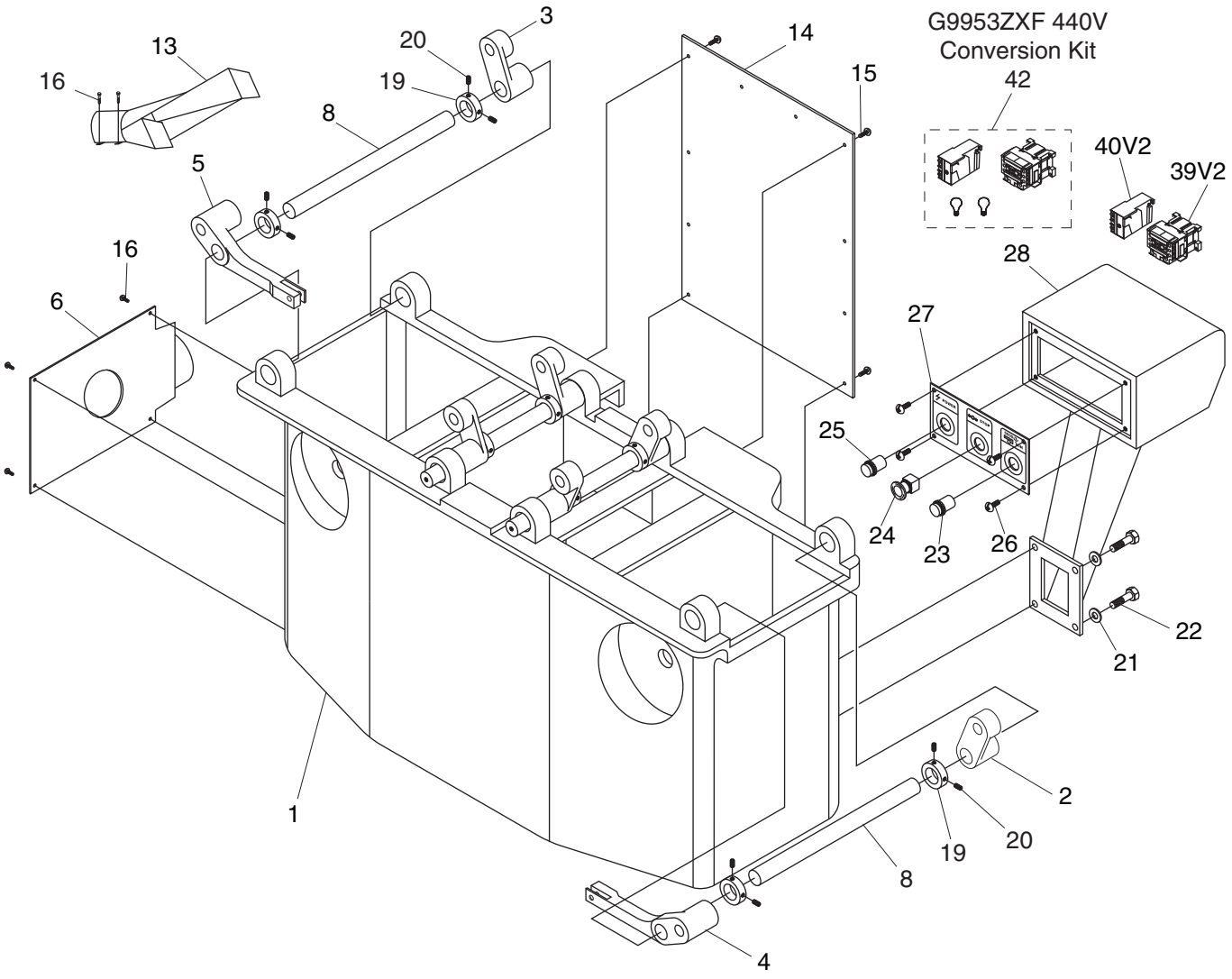
G9860/G9860ZX Handwheel Breakdown & Parts List



REF	PART #	DESCRIPTION
501	P9860501	LIFT ROD BRACKET
502	P9860502	HANDWHEEL
503	P9860503	BEVEL GEAR
504	P9860504	SLEEVE
505	P9860505	LIFT ROD
506	P9860506	GEAR SHAFT
507	P9860507	LIFT CONNECTOR
508	P9860508	SPECIAL EXT RETAINER RING
509	PR10M	EXT RETAINING RING 22MM
510	P9860510	SPECIAL FLAT WASHER D12 X 8MM
511	P9860511	LOCK KNOB M10-1.5 X 20MM
512	P9860512	HANDWHEEL KNOB 3/8"-16

REF	PART #	DESCRIPTION
513	PSB47M	CAP SCREW M10-1.5 X 40
514	PN02M	HEX NUT M10-1.5
515	PSS23M	SET SCREW M4-.7 X 10
516	P9860516	GREASE FITTING
517	PK20M	KEY 5 X 5 X 15
518	PLW04M	LOCK WASHER 8MM
519	PB07M	HEX BOLT M8-1.25 X 25
520	PB58	HEX BOLT 3/8-16 X 2
521	PN08	HEX NUT 3/8"-16
522	P9860522	SPECIAL NUT M25-1.5
523	PSS02M	SET SCREW M6-1 X 6

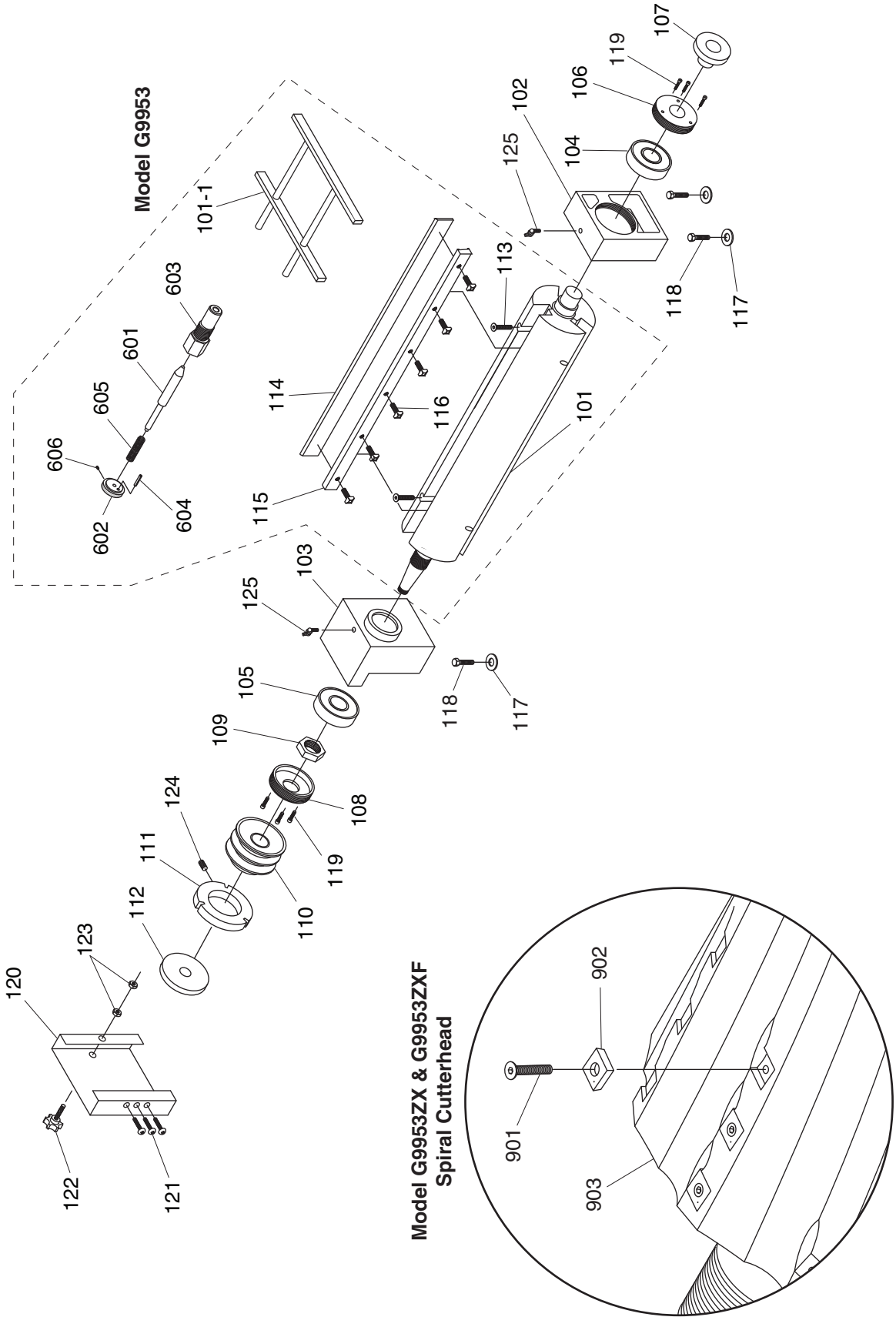
G9953/G9953ZX/G9953ZXF Cabinet Breakdown & Parts List



REF	PART #	DESCRIPTION
1	P9953001	BASE
2	P9860003	INFEED TABLE SUPPORT
3	P9860005	OUTFEED TABLE SUPPORT
4	P9860004	INFEED TABLE LIFTING ARM
5	P9860010	OUTFEED TABLE LIFTING ARM
6	P9953006	DUST HOOD
8	P9953008	TABLE HEIGHT SPINDLE
13	P9953013	DUST CHUTE
14	P9860011	MOTOR ACCESS COVER
15	PS68M	PHLP HD SCR M6-1 X 10
16	PS14M	PHLP HD SCR M6-1 X 12
19	P9860033	STOP COLLAR
20	PSS20M	SET SCREW M8-1.25 X 8
21	PW04M	FLAT WASHER 10MM

REF	PART #	DESCRIPTION
22	PSB64M	CAP SCREW M10-1.5 X 25
23	P9860014	ON BUTTON
24	P9860015	STOP BUTTON
25	P9860016	POWER LAMP
26	PS14M	PHLP HD SCR M6-1 X 12
27	P9953027	CONTROL PANEL
28	P9953028	CONTROL PANEL PEDESTAL
39V2	P9953039V2	CONTACTOR TECO CU-27 220V V2.05.08
39V2	P9953ZX039V2	CONTACTOR TECO CU-27 220V V2.05.08
39V2	P9953ZXF039V2	CONTACTOR TECO CU-18 220V V2.05.08
40V3	P9953040V3	OL RELAY TECO RHU-80A2 24.5-36A V3.01.11
40V3	P9953ZX040V3	OL RELAY TECO RHU-80A2 24.5-36A V3.01.11
40V3	P9953ZXF040V3	OL RELAY TECO RHU-10 15-20A V3.01.11
42	P9953ZXF042	440V CONVERSION KIT

G9953/G9953ZX/G9953ZXF Cutterhead Breakdown



G9953 Cutterhead Parts List

REF	PART #	DESCRIPTION
101-1	H2405	JOINTER PAL CARBIDE JIG
101	P9953101	CUTTERHEAD 4-KNIFE V2.10.04
102	P9953102	BEARING HOUSING FRONT
103	P9953103	BEARING HOUSING REAR
104	P6206	BALL BEARING 6206ZZ
105	P6208	BALL BEARING 6208ZZ
106	P9953106	BEARING END CAP
107	P9953107	BRAKE NUT M30-1.5
108	P9953108	BEARING CAP
109	P9953109	SPANNER NUT M40-1.5P
110	P9953110	CUTTERHEAD PULLEY
111	P9953111	CUTTERHEAD STOP PLATE
112	P9953112	END CAP
113	PS11M	PHLP HD SCR M6-1 X 16
114	P9953114	KNIFE 16"
115	P9953115	KNIFE GIB 16"

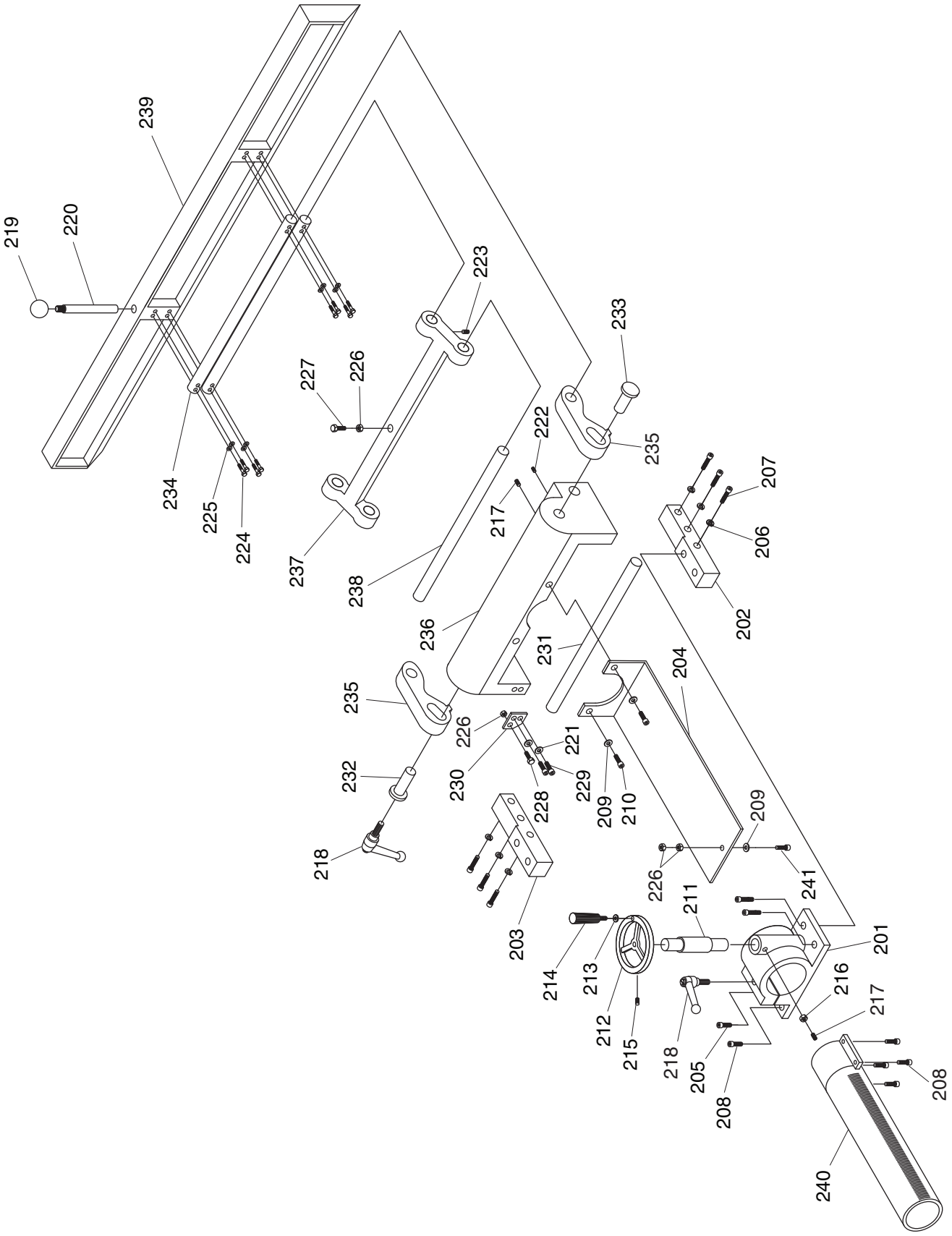
REF	PART #	DESCRIPTION
116	P9860121	GIB BOLT M8-1.25 X 10
117	PLW06M	LOCK WASHER 10MM
118	PB01M	HEX BOLT M10-1.5 X 30
119	PSB24M	CAP SCREW M5-.8 X 16
120	P9953120	CUTTERHEAD REAR COVER
121	PS21M	PHLP HD SCR M4-.7 X 15
122	P9953122	STAR KNOB
123	PN06M	HEX NUT M5-.8
124	PSS09M	SET SCREW M8-1.25 X 20
125	P9953125	GREASE FITTING
601	P9953601	ROD
602	P9953602	KNURLED KNOB
603	P9953603	BRAKE CASING
604	PRP64M	ROLL PIN 3 X 18
605	P9860607	COMPRESSION SPRING
606	PSS02M	SET SCREW M6-1 X 6

G9953ZX/G9953ZXF Cutterhead Parts List

REF	PART #	DESCRIPTION
102	P9953102	BEARING HOUSING FRONT
103	P9953103	BEARING HOUSING REAR
104	P6206	BALL BEARING 6206ZZ
105	P6208	BALL BEARING 6208ZZ
106	P9953106	BEARING END CAP
107	P9953107	BRAKE NUT M30-1.5
108	P9953108	BEARING CAP
109	P9953109	SPANNER NUT M40-1.5P
110	P9953110	CUTTERHEAD PULLEY
111	P9953111	CUTTERHEAD STOP PLATE
112	P9953112	END CAP
117	PLW06M	LOCK WASHER 10MM

REF	PART #	DESCRIPTION
118	PB01M	HEX BOLT M10-1.5 X 30
119	PSB24M	CAP SCREW M5-.8 X 16
120	P9953120	CUTTERHEAD REAR COVER
121	PS21M	PHLP HD SCR M4-.7 X 15
122	P9953122	STAR KNOB
123	PN06M	HEX NUT M5-.8
124	PSS09M	SET SCREW M8-1.25 X 20
125	P9953125	GREASE FITTING
901	PFH35M	FLAT HD TORX T20 M6-1 X 15
902	P9953ZX902	INDEXABLE INSERT 14 X 14 X 2
903	P9953ZX903	SPIRAL CUTTERHEAD BODY

G9953/G9953ZX/G9953ZXF Fence Breakdown

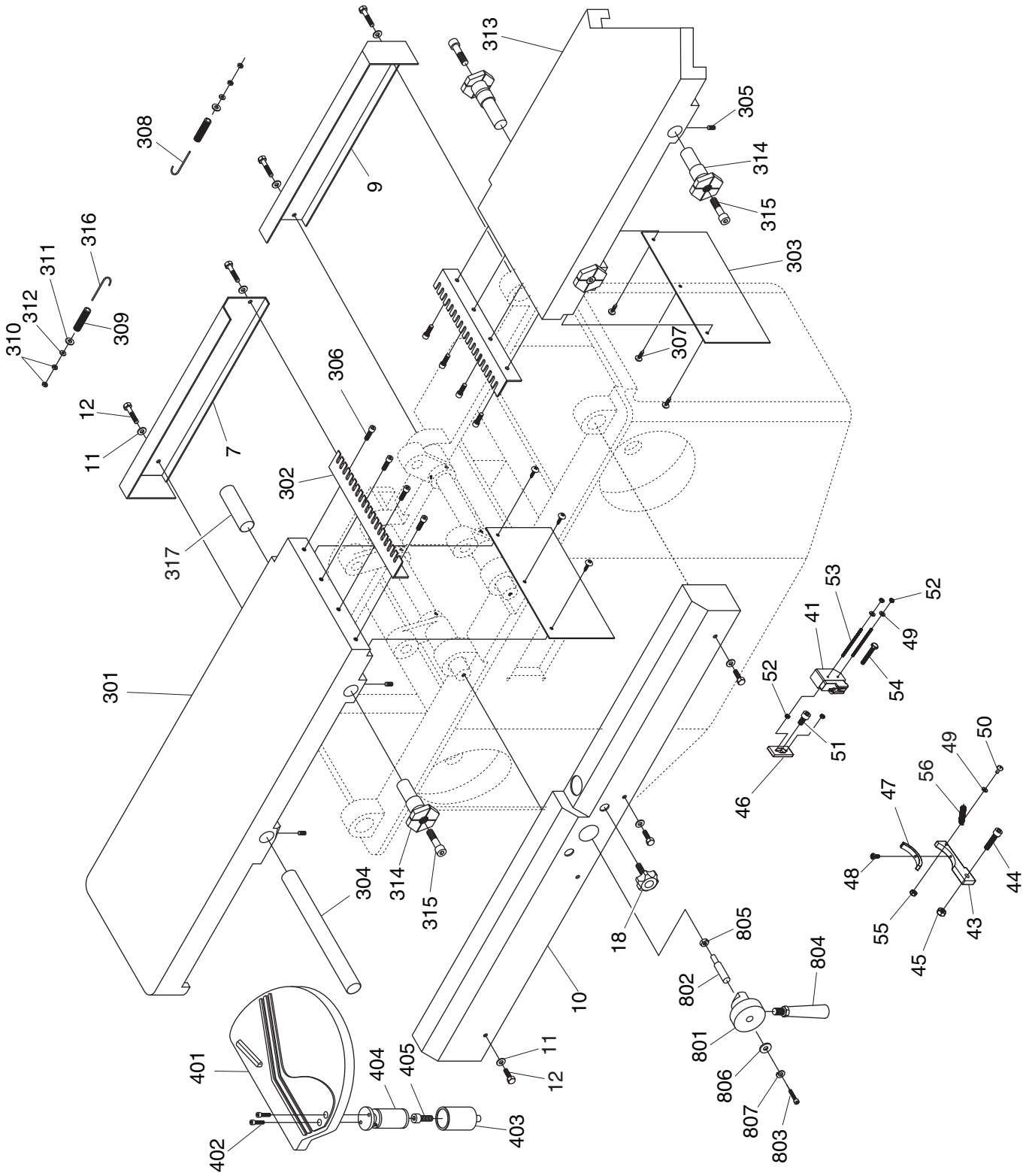


G9953/G9953ZX/G9953ZXF Fence Parts List

REF	PART #	DESCRIPTION
201	P9953201	TUBE ROD BRACKET
202	P9953202	CONNECTOR LEFT
203	P9953203	CONNECTOR RIGHT
204	P9953204	BASE PLATE
205	PSB71M	CAP SCREW M10-1.5 X 60
206	PLW04M	LOCK WASHER 8MM
207	PSB05M	CAP SCREW M8-1.25 X 50
208	PSB64M	CAP SCREW M10-1.5 X 25
209	PW03M	FLAT WASHER 6MM
210	PSB04M	CAP SCREW M6-1 X 10
211	P9953211	GEAR SHAFT
212	P9953212	HANDWHEEL
213	PW02	FLAT WASHER 3/8
214	P9953214	HANDLE 3/8-16
215	PSS16M	SET SCREW M8-1.25 X 10
216	PN03M	HEX NUT M8-1.25
217	PSS21M	SET SCREW M8-1.25 X 25
218	P9953218	LOCK LEVER 1/2 X 50MM
219	P9860221	KNOB 3/8"
220	P9860220	FENCE ADJUSTMENT HANDLE
221	PW03M	FLAT WASHER 6MM

REF	PART #	DESCRIPTION
222	PSS01M	SET SCREW M6-1 X 10
223	PSS03M	SET SCREW M6-1 X 8
224	PB26M	HEX BOLT M8-1.25 X 30
225	PW01M	FLAT WASHER 8MM
226	PN02M	HEX NUT M10-1.5
227	PB73M	HEX BOLT M10-1.5 X 50
228	PB07M	HEX BOLT M8-1.25 X 25
229	PSB01M	CAP SCREW M6-1 x 16
230	P9953230	BRACKET
231	P9953231	ANCHOR ROD
232	P9953232	PIVOT PIN RIGHT
233	P9953233	PIVOT PIN LEFT
234	P9953234	FENCE ROD
235	P9953235	PIVOT ARM
236	P9953236	FENCE ANGLE SEAT
237	P9953237	FENCE ROD BRACKET
238	P9953238	PIVOT ROD
239	P9953239	FENCE
240	P9953240	FENCE ROD
241	PSB06M	CAP SCREW M6-1 X 25

G9953/G9953ZX/G9953ZXF Table Breakdown

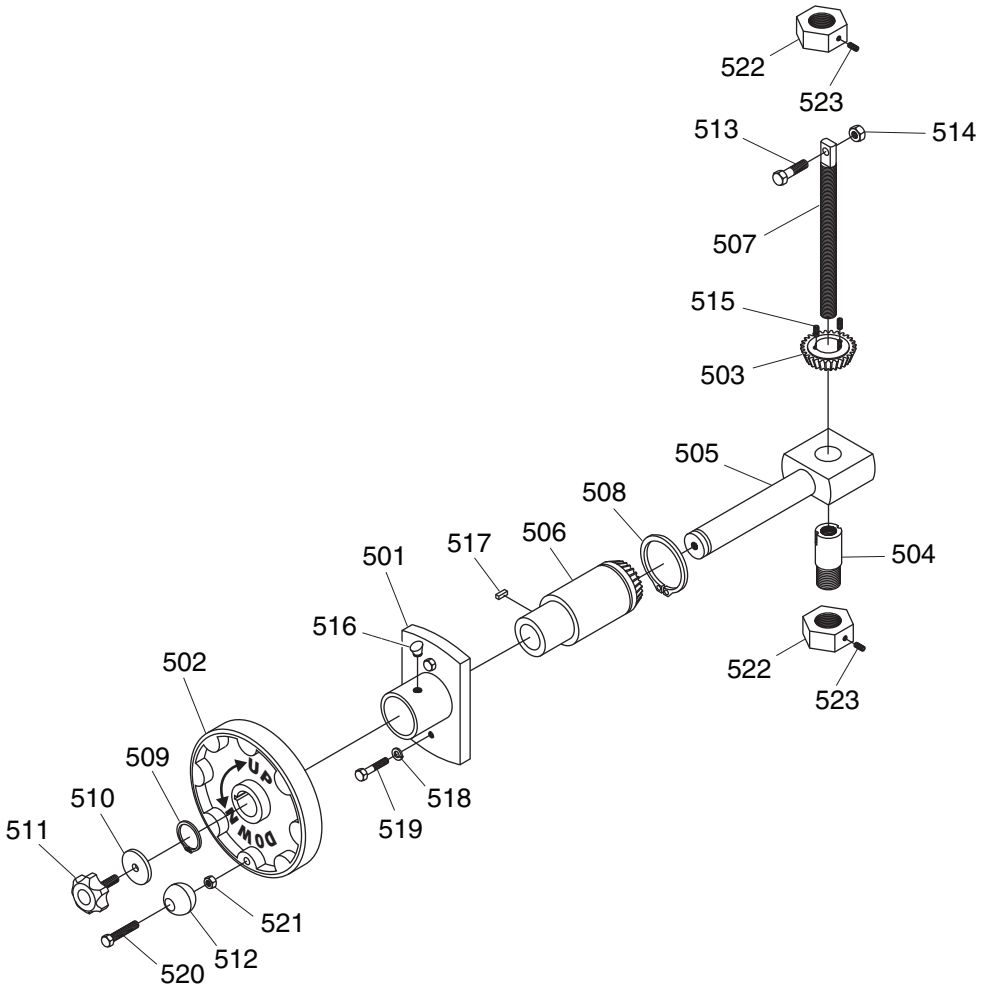


G9953/G9953ZX/G9953ZXF Table Parts List

REF	PART #	DESCRIPTION
7	P9953007	OUTFEED TABLE REAR HOUSING
9	P9953009	INFEED TABLE REAR HOUSING
10	P9953010	FRONT TABLE COVER
11	PW01M	FLAT WASHER 8MM
12	PB03M	HEX BOLT M8-1.25 X 16
18	P9860029	KNOB 3/8-16 X 1-1/2
41	P9953041	BRAKE SWITCH
43	P9953043	BRAKE PLATE
44	PSB40M	CAP SCREW M8-1.25 X 35
45	PN03M	HEX NUT M8-1.25
46	P9953046	BRAKE BRACKET
47	P9953047	BRAKE PAD
48	PS01	PHLP HD SCR 10-24 X 1/2
49	PW03	FLAT WASHER #10
50	PS06	PHLP HD SCR 10-24 X 3/8
51	PSB11M	CAP SCREW M8-1.25 X 16
52	PN04M	HEX NUT M4-.7
53	P9953053	SET SCREW M4-.7 X 65
54	PB71M	HEX BOLT M6-1 X 45
55	PN01M	HEX NUT M6-1
56	P9953056	TENSION SPRING
301	P9953301	OUTFEED TABLE
302	P9953302	NOISE DAMPER
303	P9953303	COVER
304	P9953304	TABLE PIVOT ROD (LONG)

REF	PART #	DESCRIPTION
305	PSS16M	SET SCREW M8-1.25 X 10
306	PSB01M	CAP SCREW M6-1 X 16
307	PS14M	PHLP HD SCR M6-1 X 12
308	P9953308	J-ROD (LONG)
309	P9953309	TENSION SPRING
310	PN09M	HEX NUT M12-1.75
311	PW01	FLAT WASHER 1/2
312	PW02	FLAT WASHER 3/8
313	P9953313	INFEED TABLE
314	P9860310	BED PIVOT PIN
315	PSB70M	CAP SCREW M10-1.5 X 45
316	P9953316	J-ROD (SHORT)
317	P9860316	TABLE PIVOT ROD (SHORT)
401	P9953401	CUTTERHEAD GUARD
402	PSB06M	CAP SCREW M6-1 X 25
403	P9860403	SPRING SHAFT HOUSING
404	P9860404	SPRING SHAFT
405	PSB129M	CAP SCREW M12-1.75 X 20
801	P9953801	HANDLE HUB
802	P9953802	SHAFT
803	PSB10M	CAP SCREW M5-.8 X 15
804	P9953804	HANDLE
805	PN20	HEX NUT 5/16"-24
806	PW02M	FLAT WASHER 5MM
807	PLW01M	LOCK WASHER 5MM

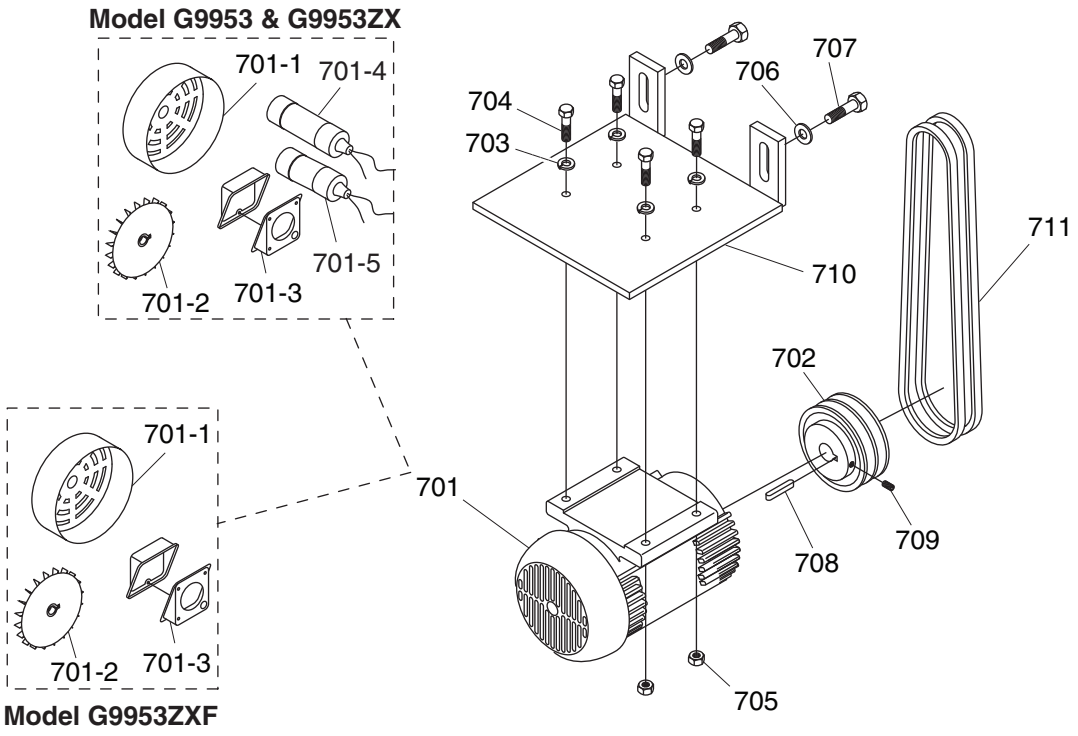
G9953/G9953ZX/G9953ZXF Handwheel Breakdown & Parts List



REF	PART #	DESCRIPTION
501	P9860501	LIFT ROD BRACKET
502	P9860502	HANDWHEEL
503	P9860503	BEVEL GEAR
504	P9860504	SLEEVE
505	P9860505	LIFT ROD
506	P9860506	GEAR SHAFT
507	P9860507	LIFT CONNECTOR
508	P9860508	SPECIAL EXT RETAINER RING
509	PR10M	EXT RETAINING RING 22MM
510	P9860510	SPECIAL FLAT WASHER D12 X 8MM
511	P9860511	LOCK KNOB M10-1.5 X 20MM
512	P9860512	HANDWHEEL KNOB 3/8"-16

REF	PART #	DESCRIPTION
513	PSB47M	CAP SCREW M10-1.5 X 40
514	PN02M	HEX NUT M10-1.5
515	PSS23M	SET SCREW M4-.7 X 10
516	P9860516	GREASE FITTING
517	PK20M	KEY 5 X 5 X 15
518	PLW04M	LOCK WASHER 8MM
519	PB07M	HEX BOLT M8-1.25 X 25
520	PB58	HEX BOLT 3/8-16 X 2
521	PN08	HEX NUT 3/8"-16
522	P9860522	SPECIAL NUT M25-1.5
523	PSS02M	SET SCREW M6-1 X 6

G9953/G9953ZX/G9953ZXF Motor Breakdown



G9953/G9953ZX Motor Parts List

REF	PART #	DESCRIPTION
701	P9953701	MOTOR 5 HP 220V 1PH
701-1	P9953701-1	MOTOR FAN COVER
701-2	P9953701-2	MOTOR FAN
701-3	P9953701-3	MOTOR WIRING JUNCTION BOX
701-4	P9953701-4	S CAP. 800MFD 250V 2-7/8 X 3-1/4
701-5	P9953701-5	R CAP. 30M 350V 3 X 2
702	P9860702	MOTOR PULLEY
703	PLW06M	LOCK WASHER 10MM

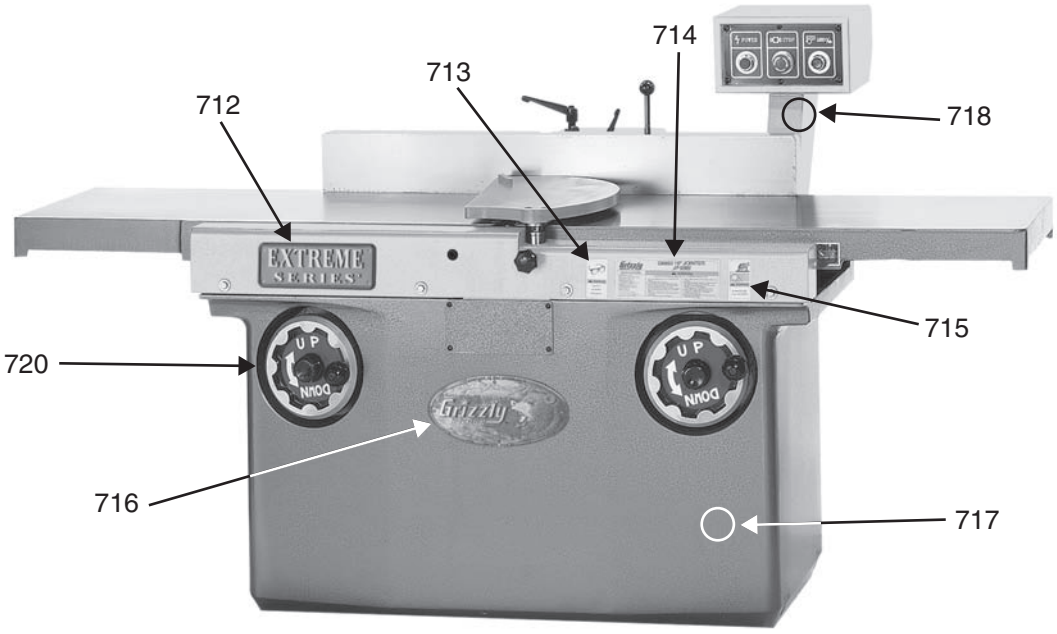
REF	PART #	DESCRIPTION
704	PB31M	HEX BOLT M10-1.5 X 40
705	PN02M	HEX NUT M10-1.5
706	PW06M	FLAT WASHER 12MM
707	PB35M	HEX BOLT M12-1.75 X 40
708	PK57M	KEY 7 X 7 X 65
709	PSS09M	SET SCREW M8-1.25 X 20
710	P9953710	MOTOR MOUNT PLATE
711	PVA50	V-BELT A50

G9953ZXF Motor Parts List

REF	PART #	DESCRIPTION
701	P9953ZXF701	MOTOR 5 HP 220V 3PH
701-1	P9953ZXF701-1	MOTOR FAN COVER
701-2	P9953ZXF701-2	MOTOR FAN
701-3	P9953ZXF701-3	MOTOR WIRING JUNCTION BOX
702	P9953702	MOTOR PULLEY
703	PLW06M	LOCK WASHER 10MM
704	PB31M	HEX BOLT M10-1.5 X 40

REF	PART #	DESCRIPTION
705	PN02M	HEX NUT M10-1.5
706	PW06M	FLAT WASHER 12MM
707	PB35M	HEX BOLT M12-1.75 X 40
708	PK57M	KEY 7 X 7 X 65
709	PSS09M	SET SCREW M8-1.25 X 20
710	P9953710	MOTOR MOUNT PLATE
711	PVA50	V-BELT A50

Label Placement



REF	PART #	DESCRIPTION
712	H7942	EXTREME SERIES NAMEPLATE
713	PLABEL-11A	EYE HAZARD LABEL
714	P9860714	MACHINE ID LABEL (G9860)
714	P9860ZX714	MACHINE ID LABEL (G9860ZX)
714	P9953714	MACHINE ID LABEL (G9953)
714	P9953ZX714	MACHINE ID LABEL (G9953ZX)
714	P9953ZXF714	MACHINE ID LABEL (G9953ZXF)
715	P9860715	PUSH BLOCK WARNING
716	G8589	GRIZZLY NAMEPLATE-LARGE

REF	PART #	DESCRIPTION
717	PPAINT-1	GRIZZLY GREEN TOUCH-UP PAINT
718	PPAINT-11	GRIZZLY PUTTY TOUCH-UP PAINT
719*	P9860719	MODEL NO. LABEL (G9860)
719*	P9860ZX719	MODEL NO. LABEL (G9860ZX)
719*	P9953719	MODEL NO. LABEL (G9953)
719*	P9953ZX719	MODEL NO. LABEL (G9953ZX)
719*	P9953ZXF719	MODEL NO. LABEL (G9953ZXF)
720	P9860720	HANDWHEEL UP/DOWN LABEL

* Not Shown

⚠WARNING

Safety labels warn about machine hazards and ways to prevent injury. The owner of this machine MUST maintain the original location and readability of the labels on the machine. If any label is removed or becomes unreadable, REPLACE that label before using the machine again. Contact Grizzly at (800) 523-4777 or www.grizzly.com to order new labels.

Grizzly Industrial, Inc. WARRANTY CARD

Name _____

Street _____

City _____ State _____ Zip _____

Phone # _____ Email _____ Invoice # _____

Model # _____ Order # _____ Serial # _____

The following information is given on a voluntary basis. It will be used for marketing purposes to help us develop better products and services. ***Of course, all information is strictly confidential.***

1. How did you learn about us?

____ Advertisement ____ Friend ____ Catalog
____ Card Deck ____ Website ____ Other:

2. Which of the following magazines do you subscribe to?

____ Cabinetmaker & FDM
____ Family Handyman
____ Hand Loader
____ Handy
____ Home Shop Machinist
____ Journal of Light Cont.
____ Live Steam
____ Model Airplane News
____ Old House Journal
____ Popular Mechanics
____ Popular Science
____ Popular Woodworking
____ Precision Shooter
____ Projects in Metal
____ RC Modeler
____ Rifle
____ Shop Notes
____ Shotgun News
____ Today's Homeowner
____ Wood
____ Wooden Boat
____ Woodshop News
____ Woodsmith
____ Woodwork
____ Woodworker West
____ Woodworker's Journal
____ Other:

3. What is your annual household income?

____ $20,000-$29,000 ____ $30,000-$39,000 ____ $40,000-$49,000
____ $50,000-$59,000 ____ $60,000-$69,000 ____ $70,000+

4. What is your age group?

____ 20-29 ____ 30-39 ____ 40-49
____ 50-59 ____ 60-69 ____ 70+

5. How long have you been a woodworker/metalworker?

____ 0-2 Years ____ 2-8 Years ____ 8-20 Years ____ 20+ Years

6. How many of your machines or tools are Grizzly?

____ 0-2 ____ 3-5 ____ 6-9 ____ 10+

7. Do you think your machine represents a good value? _____Yes _____No

8. Would you recommend Grizzly Industrial to a friend? _____Yes _____No

9. Would you allow us to use your name as a reference for Grizzly customers in your area?
Note: *We never use names more than 3 times.* _____Yes _____No

10. Comments: _____

_____

_____

_____

CUT ALONG DOTTED LINE

FOLD ALONG DOTTED LINE

Place
Stamp
Here

GRIZZLY INDUSTRIAL, INC.
P.O. BOX 2069
BELLINGHAM, WA 98227-2069

FOLD ALONG DOTTED LINE

Send a Grizzly Catalog to a friend:

Name_____

Street_____

City_____State_____Zip_____

TAPE ALONG EDGES--PLEASE DO NOT STAPLE

WARRANTY AND RETURNS

Grizzly Industrial, Inc. warrants every product it sells for a period of **1 year** to the original purchaser from the date of purchase. This warranty does not apply to defects due directly or indirectly to misuse, abuse, negligence, accidents, repairs or alterations or lack of maintenance. This is Grizzly's sole written warranty and any and all warranties that may be implied by law, including any merchantability or fitness, for any particular purpose, are hereby limited to the duration of this written warranty. We do not warrant or represent that the merchandise complies with the provisions of any law or acts unless the manufacturer so warrants. In no event shall Grizzly's liability under this warranty exceed the purchase price paid for the product and any legal actions brought against Grizzly shall be tried in the State of Washington, County of Whatcom.

We shall in no event be liable for death, injuries to persons or property or for incidental, contingent, special, or consequential damages arising from the use of our products.

To take advantage of this warranty, contact us by mail or phone and give us all the details. We will then issue you a "Return Number,'' which must be clearly posted on the outside as well as the inside of the carton. We will not accept any item back without this number. Proof of purchase must accompany the merchandise.

The manufacturers reserve the right to change specifications at any time because they constantly strive to achieve better quality equipment. We make every effort to ensure that our products meet high quality and durability standards and we hope you never need to use this warranty.

Please feel free to write or call us if you have any questions about the machine or the manual.

Thank you again for your business and continued support. We hope to serve you again soon.

grizzly.com®

TOOL WEBSITE

Buy Direct and Save with Grizzly® – Trusted, Proven and a Great Value!

~Since 1983~

Visit Our Website Today For Current Specials!

ORDER
24 HOURS A DAY!
1-800-523-4777